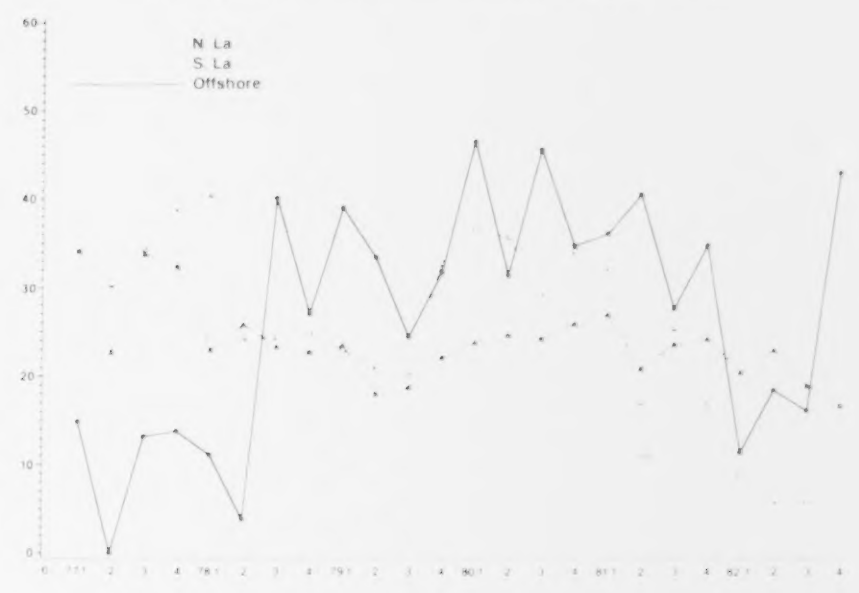
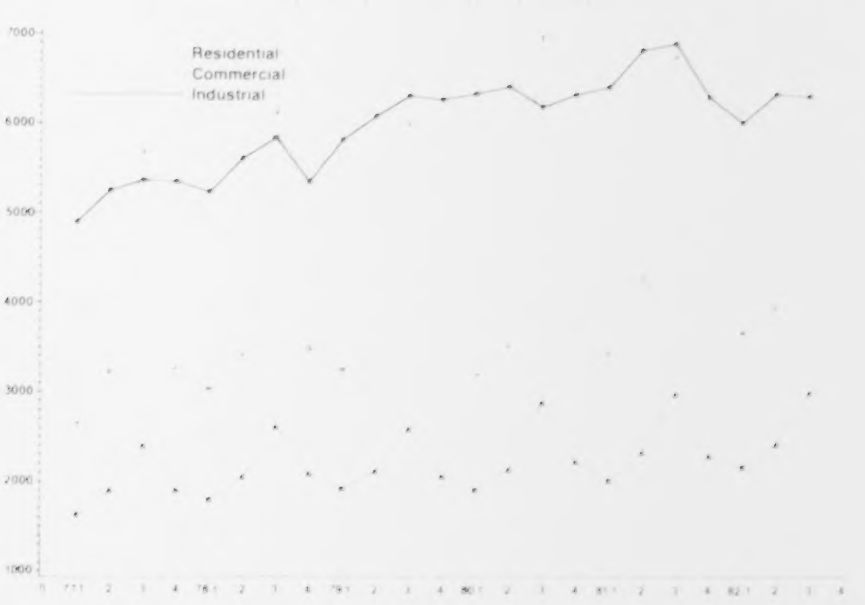
Production

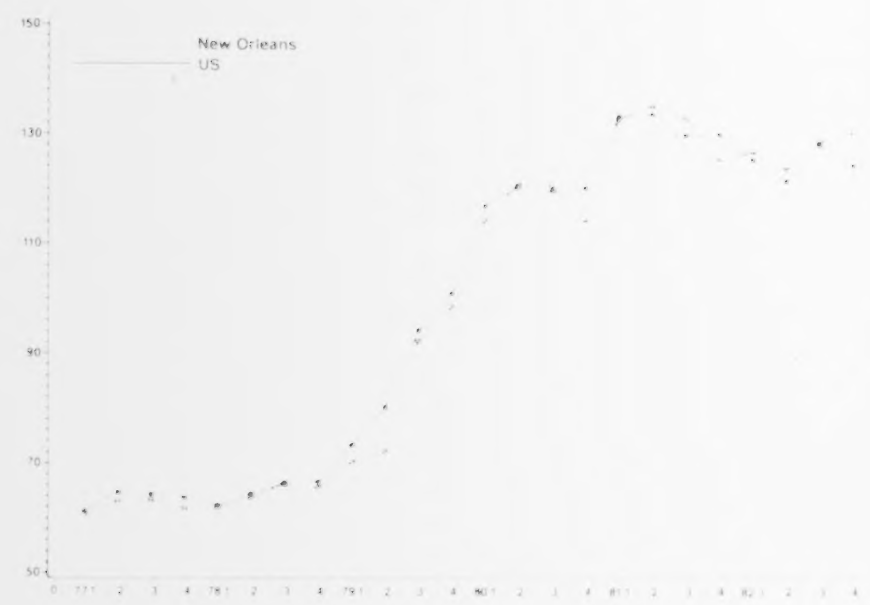


Figures represent **total** except when otherwise noted.

Indicator	1981	1982.1	1982.2	1982.3	Oct	Nov	Dec	Year To Date Through Last Month Reported 1981	Year To Date Through Last Month Reported 1982	Percent Change
OIL WELLS COMPLETED										
North	1,034	266	318	321	82	100	23	1,034	1,173	13.4
South	317	67	98	81	14	27	40	317	339	6.9
Offshore	18	1	4	13	0	2	4	18	24	33.3
Total	1,369	338	410	415	44	129	75	1,369	1,536	12.1
GAS WELLS COMPLETED										
North	1,212	234	186	326	59	92	125	1,212	1,073	-15.8
South	352	83	94	107	38	32	27	352	381	8.2
Offshore	31	6	10	11	0	1	2	31	39	25.8
Total	1,595	323	290	443	100	131	154	1,595	1,441	-9.7
DRY HOLES DRILLED										
North	893	226	284	265	78	63	49	893	995	10.6
South	895	224	177	182	38	56	67	895	714	-18.0
Offshore	52	14	10	13	2	1	1	82	36	-27.0
Total	1,840	464	471	460	118	140	107	1,840	1,770	-3.9
ACTIVE RIGS - WILDCATTING (Ave.)										
North	33	14	9	9	7	9	9	391	120	-69.4
South	59	45	37	23	13	22	14	713	513	-28.4
Offshore	6	3	2	1	3	6	6	75	32	-57.4
Total	98	166	48	33	23	37	29	1,179	665	-43.6
ACTIVE RIGS (Ave.)										
North	119	160	152	159	188	172	190	1,428	1,968	37.8
South	249	221	161	123	118	142	154	2,098	1,679	-20.0
Offshore	18	15	13	10	9	13	13	220	148	-32.8
Total	386	396	326	292	315	327	357	4,636	4,045	-12.8
CRUDE OIL PRODUCTION (MBPD) - Ave.										
North	83.5	86.4	86.3	86.6	87.3	87.2	83.8	83.5	86.3	3.2
South	283.2	262.6	268.1	263.1	264.4	263.5	247.3	283.2	265.8	- 6.1
Offshore	65.4	61.7	63.4	62.9	61.0	57.3	64.9	65.4	60.2	- 8.0
Total	432.2	410.9	417.9	412.7	412.7	398.1	396.1	432.2	412.4	- 4.6
ELECTRICITY PRODUCTION (Gigawatts)										
Gas generated	39,988	8,832	9,387	9,913	2,853	2,265	2,324	35,948	35,639	-10.9
Oil generated	2,635	381	471	47	16	17	9	2,635	940	-64.3
Coal generated	1,528	268	1,038	1,958	700	496	540	1,528	4,930	306.6
Total generation	44,111	9,481	10,894	11,918	3,568	2,778	2,893	44,111	41,632	-5.6
REFINERY RUNS (MMBPD)	3.73	3.67	3.73	3.71	3.76	3.70	3.57	3.73	3.75	0.5
CRUDE OIL STOCK (MMBBL)	13.01	10.08	12.06	13.28	12.81	12.6	11.65	13.01	12.08	-7.2

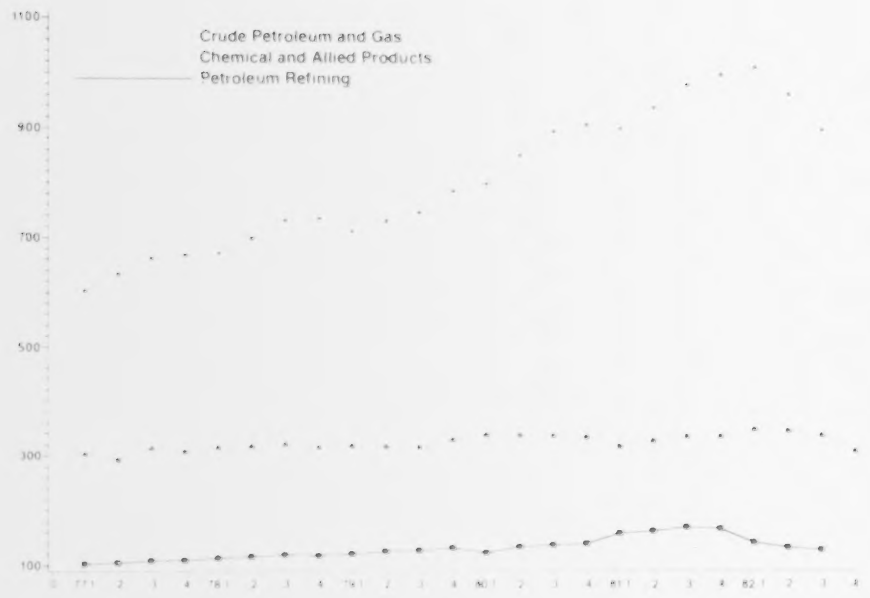
Consumption





Indicator	1981	1982.1	1982.2	1982.3	Oct	Nov	Dec	Year To Date Through Last Month Reported 1981	Year To Date Through Last Month Reported 1982	Percent Change
GASOLINE CONSUMPTION (Millions Gals.)										
Louisiana	2,203	514	564	548	179	156	180	2,103	2,141	1.8
US	104,158	23,919	26,345	26,992	8,268	8,143	--	96,262	94,177	-2.2
ELECTRICITY CONSUMPTION (Gigawatts)										
Residential	16,119	3,642	3,929	2,642	1,695	1,121	--	17,180	12,974	-24.5
Commercial	9,592	2,167	2,414	2,989	914	764	--	8,937	9,234	3.3
Industrial	26,118	5,964	6,271	7,279	2,044	1,706	--	24,606	24,211	-1.6
Other	4,117	921	1,076	1,108	414	321	--	3,762	3,717	-1.2
Total	56,147	12,709	13,690	14,747	4,959	4,297	--	54,824	49,663	-10.4

Energy Economics



*Estimates from Louisiana Dept. of Labor
Labor Market Information

Indicator	1981	1982.1	1982.2	1982.3	Oct	Nov	Dec	Year To Date Through Last Month Reported 1981	Year To Date Through Last Month Reported 1982	Percent Change
ELECTRICITY PRICES (¢/KWH)										
Residential										
CLECO	6.0	5.9	6.7	6.8	6.1	7.1	7.1	6.0	7.1	18.3
GSU	5.2	4.9	5.4	5.9	6.0	6.8	6.7	5.1	6.6	29.4
LP&L *(NR for June)	5.7*	5.3	6.4	6.8	6.9	6.9	7.1	5.7	6.9	21.1
NOPSI	5.0	5.2	6.3	6.7	6.8	6.8	6.8	5.0	6.7	34.0
SWEPCO	3.8	3.6	4.5	5.4	6.1	5.9	5.6	3.8	5.2	36.4
Commercial										
CLECO	5.9	6.2	6.5	6.3	7.6	7.5	7.3	5.9	6.9	16.9
GSU	4.6	4.3	4.7	4.3	6.2	6.6	6.6	4.5	4.9	10.0
LP&L *(NR for June)	5.5*	5.6	6.5	6.0	6.1	6.2	6.2	5.5	6.0	9.1
NOPSI	6.4	6.6	6.7	6.5	6.8	6.8	7.1	6.4	6.7	5.0
SWEPCO	3.3	3.2	3.8	4.6	5.2	6.5	6.3	3.3	4.2	28.0
Industrial										
CLECO	4.6	4.7	5.3	6.6	6.0	6.6	6.3	4.6	6.4	17.3
GSU *(NR for June)	3.1*	3	3.6	3.4	4.0	3.8	3.7	3.1	3.6	16.5
LP&L	4.0	4.2	4.1	4.6	4.6	4.6	--	5.0	4.6	10.5
NOPSI	5.0	5.2	5.4	5.4	5.4	5.4	5.8	5.0	6.4	9.6
SWEPCO	2.9	2.7	3.1	4.2	4.6	5.0	4.8	2.9	4.1	41.4
*OIL HEAD PRICE OF CRUDE OIL ($/BBL - Ave.)	31.85	29.64	27.61	28.19	28.74	28.70	27.95	32.17	28.50	11.4
GASOLINE PRICES (Ave. Per Gal.)										
New Orleans Ave. Retail Pump	131.3	124.9	121.0	127.7	126.2	124.4	122.4	131.3	124.2	-5.4
U.S. Ave. Retail Pump	131.2	126.4	123.1	128.2	127.6	131.6	130.7	131.1	127.9	-2.5
EMPLOYMENT (Average)										
Oil and gas production (SIC 13)	94,721	100,380	96,536	89,101	93,500*	93,000*	91,800*	94,721	91,667*	-11.1*
Chemical and allied products (SIC 28)	32,667	34,579	34,340	33,846	30,000	29,700	32,000	32,667	32,410	-0.8
Petroleum refining (SIC 29)	16,314	14,068	13,179	12,718	13,400	13,400	12,200	16,314	13,166	-19.3
WAGES - (Million$)										
Oil and gas production	2,439	682	662	624	-	-	-	1,760	1,962	11.8
Chemical and allied products	943	254	264	267	-	-	-	690	785	13.7
Petroleum refining	472	112	102	103	-	-	-	348	317	-9.0
NUMBER OF ESTABLISHMENTS (Ave.)										
Oil and gas production	2,275	2,532	2,607	2,621	-	-	-	2,238	2,586	15.5
Chemical and allied products	212	208	212	216	-	-	-	211	211	0
Petroleum refining	58	69	70	67	-	-	-	57	68	19.8
PRINCIPAL ENERGY RELATED STATE REVENUES (Millions $)										
Severance - oil and condensate	815.3	209.6	181.3	194.6	51.4	63.0	76.6	815.3	776.5	- 4.8
Severance - natural gas	164.2	40.1	36.5	34.7	10.1	11.2	14.5	164.2	147.2	-10.4
Bonuses	146.0	27.9	17.0	9.3	4.7	2.1	5.9	146.0	66.9	-54.2
Rentals	46.3	15.3	14.1	12.3	3.6	3.0	5.6	46.3	53.9	16.4
Royalties	414.5	153.9	106.5	110.4	34.0	36.0	40.6	414.5	482.4	16.3
Special fuels tax	24.7	6.0	6.5	6.3	2.5	2.1	1.9	24.7	25.3	2.4
Gasoline tax	165.6	40.1	41.2	40.8	13.7	13.8	12.5	165.6	162.1	-2.2
Public Utilities tax	25.5	6.8	6.9	7.1	0.6	6.4	0.0	25.5	27.8	9.0
Nat. Gas franchise tax	7.7	2.3	2.7	2.1	0.0	2.2	1.3	7.7	10.6	37.6
Total	1,809.8	502.0	411.7	417.6	120.6	141.9	158.9	1,809.8	1,752.7	-3.2
TOTAL STATE REVENUES (Millions $)	2,787.8	597.3	768.3	674.1	207.6	239.9	250.5	2,787.8	2,737.7	1.8
ENERGY RELATED REVENUES AS % OF STATE TOTAL	64.9	84.0	53.5	61.9	58.0	59.1	63.4	64.9	64.0	-0.9

Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Spring 1983

The Center for Energy Studies is proud to present the *first* quarterly issue of *Louisiana Energy Indicators*. The intent of this publication is to visually inform legislators, businessmen, administrators, and citizens of the interrelationships of the energy-related business and industry production, sales, employment, taxes, prices, consumption, etc. The data will show past trends as to what occurred and allow those using to make projections as to what might occur.

The Center for Energy Studies staff has gathered pertinent monthly data from 1977 forward from numerous state and federal offices and several publications. Cheerful and unusual assistance at all levels contributed to successful data gathering. These data, which now contain time series on approximately 150 variables, have been entered in our *Louisiana Energy Indicators Data Base*. Some of the variables will be featured quarterly in *Louisiana Energy Indicators*. Others will occur on a rotating or special basis.

Due to space constraints all tables, except for a featured series, represent only the past two years of data. The featured item, which for this issue is natural gas, will present quarterly the Center's monthly time series from 1977.

Both the data base and this quarterly publication are intended to be dynamic. As new monthly data become available, they will be added, and as issues arise, an attempt will be made to cover them. If users of this publication would like a listing of the variables currently included in the data base, please send your request and a self-addressed, stamped envelope to:

Roberta A. Scull
Center for Energy Studies
Louisiana State University
Baton Rouge, LA 70803-0301

Suggestions for improving this publication and ideas for future featured series and or additional variables are sought and welcomed. The more input we have from the users of this publication, the more valuable it will be. If possible, suggestions will be incorporated.

What if . . .

Louisiana's current fiscal condition may revive an old issue. That is, should the natural gas severance tax be levied on a percent-of-value basis rather than a unit basis. The concept is not without precedent since legislation was enacted in 1972 (later repealed) that authorized a gas severance tax of 11/2 percent of value.

The accompanying table illustrates the revenue impact or the cost to industry, depending on one's perspective of the application of tax rates, of the six top gas-producing states to the fiscal year 1981-82 taxable gas production in Louisiana. Column one contains the basic severance tax rate exclusive of any minor exemptions in each state. The very low rate of tax levied in the State of Kansas should not be included as a severance tax since the revenues derived just support the regulatory activities of the state. The second column illustrates what the gas severance tax would have been had the tax rate of these other states been applied to the 2.29 billion Mcf of gas production in Louisiana during FY 82 at an average price of $2.00 Mcf. This price was selected as a conservative average based on a reported figure of $2.07 at wellhead by the *Natural Gas Annual 1981*, Energy Information Administration, Office of Oil and Gas, U.S. Department of Energy, September 1982. The implicit severance tax ranges from a low of 1.9 million using the Kansas conservation rate to a high of $343.0 million using the Texas rate. The last column of the table shows the difference between what Louisiana actually collected during FY 82 and what would have been collected at the other rates. It should also be noted that of the states listed in the table Louisiana has the lowest severance tax on gas (with the Kansas exception) but the highest severance tax on oil.

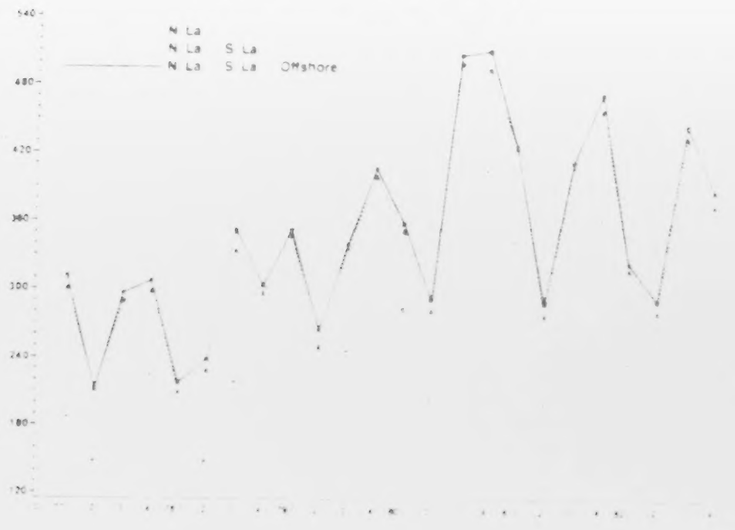
Gas Severance Tax Rates and the Implicit Louisiana Severance Tax for Selected States, 1981-82

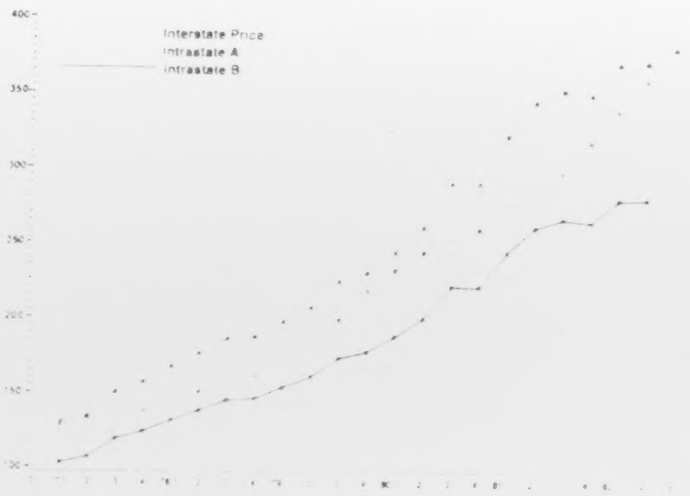
	Gas Severance Tax Rate	Implicit Louisiana Gas Severance Tax (million $)	Difference from Louisiana (million $)
Louisiana	7¢/Mcf	159.4	—
Texas	7.5% of value	343.5	184.1
Oklahoma	7.085% of value	324.5	165.1
New Mexico	2.74% of value plus 5¢/Mcf	240.0	80.6
Kansas	085¢/Mcf	1.9	-157.5
Wyoming	8 Mills per dollar plus 6% of value	275.2	115.8

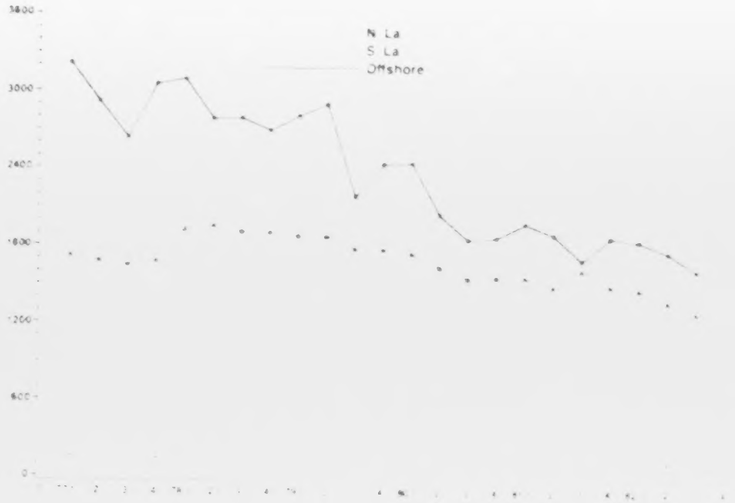
Rate as of May 1981.

Louisiana is actual, others are based on Louisiana taxable production of 2.29 billion Mcf in 1981-82 and an average wellhead price of $2.00 Mcf.

Historical Presentation—Natural Gas







Indicator	77.1	77.2	77.3	77.4	78.1	78.2	78.3	78.4	79.1	79.2	79.3	79.4
NATURAL GAS PRODUCTION (MMCFPD)												
North	955	956	942	924	933	915	897	885	923	952	1,822	1,015
South	2,420	2,376	2,362	2,326	6,313	6,343	6,190	6,069	5,968	5,916	5,822	5,649
Offshore	1,424	1,288	1,183	1,402	1,421	1,321	1,341	1,272	1,303	1,351	1,289	1,288
Total	4,800	4,621	4,489	4,652	8,668	8,581	8,428	8,227	8,195	8,220	8,134	7,953
NATURAL GAS PROD/WELL (MCFPD)												
North	155	153	147	141	141	134	127	123	128	132	137	133
South	1,732	1,681	1,649	1,681	1,924	1,951	2,063	1,893	1,871	1,866	1,770	1,762
Offshore	3,213	2,918	2,639	3,053	3,094	2,782	2,787	2,693	2,805	2,896	2,174	2,427
NATURAL GAS COMPLETIONS												
North	188	147	213	225	138	147	219	218	265	155	247	322
South	112	64	76	73	71	81	115	78	82	94	89	77
Offshore	11	1	7	9	8	10	18	7	5	15	3	7
Total	311	212	296	307	217	238	352	303	352	264	339	406
NATURAL GAS PRICES ($/MCF)												
Interstate	1.30	1.33	1.35	1.37	1.43	1.50	1.55	1.60	1.66	1.82	1.98	2.17
Intrastate (A)	1.28	1.38	1.50	1.58	1.57	1.75	1.85	1.86	1.97	2.06	2.24	2.30
Intrastate (B)	1.02	1.07	1.18	1.24	1.31	1.37	1.44	1.45	1.53	1.60	1.73	1.77

Indicator	80.1	80.2	80.3	80.4	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4
NATURAL GAS PRODUCTION (MMCFPD)												
North	1,000	996	1,008	1,101	1,125	1,149	1,171	1,092	1,125	1,039	989	972
South	5,586	5,325	5,046	5,121	5,049	4,835	5,124	4,655	4,515	4,296	3,949	4,007
Offshore	1,249	1,138	997	1,083	1,080	1,045	932	1,040	1,012	971	912	1,036
Total	7,836	7,459	7,051	7,225	7,254	7,030	7,227	6,787	6,653	6,307	5,850	6,015
NATURAL GAS PROD/WELL (MCFPD)												
North	127	122	118	124	12_	123	122	111	113	103	97	94
South	1,732	1,621	1,534	1,545	1,545	1,479	1,602	1,475	1,449	1,352	1,268	1,283
Offshore	2,432	2,032	1,829	1,853	1,964	1,877	1,678	1,852	1,825	1,737	1,596	1,820
Total												
NATURAL GAS COMPLETIONS												
North	282	200	416	403	340	197	313	362	234	186	325	276
South	69	81	82	90	84	80	94	94	83	94	107	97
Offshore	7	10	7	16	2	11	4	14	6	10	11	12
Total	358	291	505	509	426	288	411	470	323	290	443	385
NATURAL GAS PRICES ($/MCF)												
Interstate	2.31	2.43	2.51	2.58	2.74	2.86	2.96	3.16	3.37	3.57	3.78	
Intrastate (A)	2.43	2.60	2.89	2.89	3.20	3.43	3.50	3.47	3.68	3.84		
Intrastate (B)	1.86	1.99	2.20	2.19	2.43	2.64	2.66	2.64	2.74			

Note: Intrastate A price was computed as the weighted average price charged by Louisiana Intrastate, Monterey, and Sugar Bowl. Intrastate B was computed by adding the Texaco contract (27 percent market share at 34c Mcf) to Interstate A and recomputing a weighted average. Data on the Texaco contract was taken from Foster and Associates, *The Impact of NGPA on Intrastate Markets in Louisiana*, 1982)

SOURCES OF LOUISIANA ENERGY INDICATOR DATA

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Electric Power Monthly. U.S. Dept. of Energy. Energy Information Administration. Office of Coal, Nuclear, Electric, and Alternate Fuels.
Electricity Production and Consumption Data

Employment and Total Wages Paid by Employers Subject to the Louisiana Employment Security Law. Louisiana Dept. of Labor. Office of Employment Security, Research and Statistics Unit. Quarterly.
Wages, Number of Establishments, Employment Data

Louisiana Climatological Data. U.S. Dept. of Commerce. National Weather Service. Monthly.
Heating and Cooling Degree Days (Not in this issue)

Labor Market Information. Louisiana Dept. of Labor. Office of Employment Security, Research and Statistics Unit. Monthly.
Employment Data

Louisiana Petroleum Activity Report. Monthly.
Drilling, Rig Activity, Oil and Gas Production, Refinery Runs and Stocks Data

Monthly Energy Review. U.S. Dept. of Energy. Energy Information Administration. Monthly.
Crude Oil Prices, Interstate Natural Gas Price Data

Monthly Motor Gasoline Reported by States. U.S. Dept. of Transportation. Monthly
Gasoline Consumption

Oil and Gas Journal. Penn Well Publishing Company. Tulsa, Oklahoma.
Gasoline Prices

Weekly Petroleum Status Report. U.S. Dept. of Energy. Energy Information Administration.
Crude Oil Prices

Other Sources

Louisiana Public Service Commission. (Unprinted Data).
Electricity Prices

Louisiana Department of Revenue. AM08 Revenue Projections Model. Monthly Monitoring Report. (Mimeograph).
Taxes and Revenues

The Department of Energy's 1981 *Natural Gas Annual* estimated Louisiana proved reserves at 48.5 billion Mcf. At $2.00 Mcf, Louisiana's natural gas reserves are at $97 billion dollars

Center for Energy Studies
E. Fraternity Circle
Louisiana State University
Baton Rouge, LA 70803-0301

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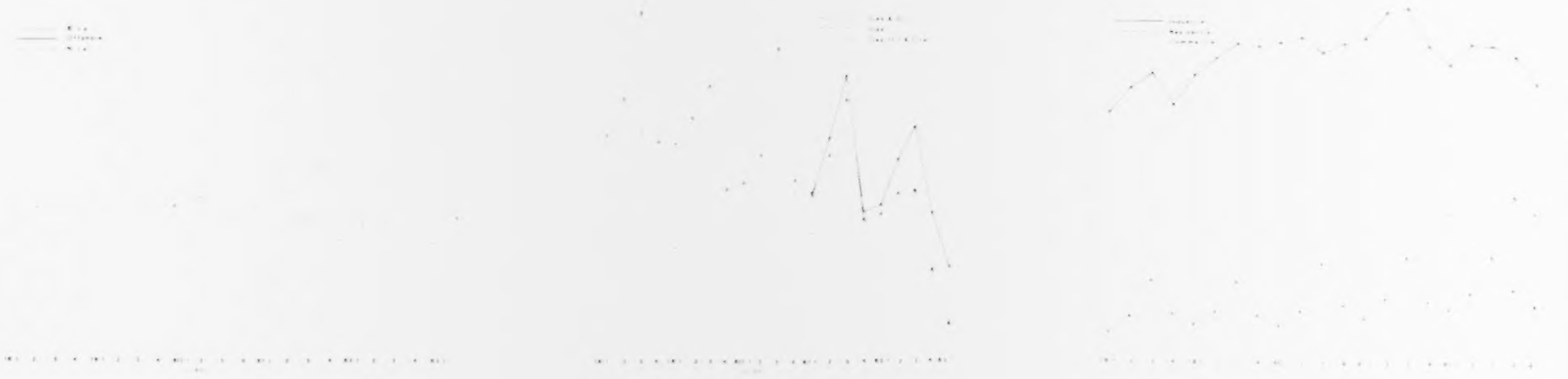
Address Correction Requested

Production

figures represent total
except when otherwise noted

Indicator	1978	1979	1980	1981	1982	1982.2	1982.3	1982.4	Jan	Feb	Mar	Year To Date Through Last Month Reported 1982	Year To Date Through Last Month Reported 1983	Percent Change
OIL WELLS COMPLETED														
North	493	643	926	1,044	1,273	318	321	205	114	88	193	254	199	-21.5
South	304	272	290	313	349	68	87	89	19	28	41	81	144	77.8
Offshore	42	28	20	18	14	4	4	3	0	0	0	0	0	100.0
Total	839	943	1,236	1,369	1,636	390	412	297	133	116	234	335	343	2.4
GAS WELLS COMPLETED														
North	722	989	1,301	1,212	1,021	184	125	126	30	45	47	234	110	-41.8
South	345	342	322	352	381	94	107	97	28	27	29	83	84	1.2
Offshore	43	30	40	31	39	10	11	12	0	2	2	6	4	-33.3
Total	1,110	1,361	1,663	1,595	1,441	290	243	235	58	74	92	323	224	-30.6
DRY HOLES DRILLED														
North	589	575	822	693	588	284	263	216	35	62	59	129	151	16.9
South	649	680	733	695	734	177	182	151	50	76	40	124	166	33.9
Offshore	18	36	51	52	38	10	10	4	1	1	1	13	13	0.0
Total	1,256	1,291	1,606	1,440	1,360	471	445	365	86	151	45	466	330	-29.2
ACTIVE RIGS - WILDCATTING (Ave.)														
North	20	18	34	33	30	9	9	8	10	7	4	14	7	-50.0
South	46	38	64	59	32	17	20	23	43	36	15	45	59	31.1
Offshore	2	4	7	6	3	2	2	4	8	5	3	7	4	-100.0
Total	68	60	105	98	65	48	49	35	61	50	44	65	57	-14.2
ACTIVE RIGS (Ave. End of Month) (DRI)														
North	75	74	103	119	164	152	159	164	200	59	53	160	100	-37.5
South	190	185	254	249	161	163	167	136	147	158	147	127	149	17.3
Offshore	9	14	17	18	12	13	13	12	15	15	15	15	13	-13.3
Total	274	273	364	386	337	393	393	314	362	230	203	496	262	-47.6
RUNNING RIGS (Ave. Hughes Tool Co.)														
North	29	35	52	59	40	43	27	35	33	45	25	54	34	-37.0
South	133	169	171	243	168	165	134	130	140	153	137	240	143	-44.1
Total	162	204	243	302	208	208	161	165	173	198	162	294	177	-49.7
NATURAL GAS PRODUCTION (MMCFPD)														
North	904	979	1,000	1,135	1,032	1,040	1,990	927	974	984	926	1,916	901	-14.6
South	6,235	5,845	5,275	4,921	4,195	4,206	3,952	4,000	3,900	3,854	3,737	4,235	3,830	-19.2
Offshore	1,340	1,609	1,718	1,023	983	972	1,053	1,034	921	867	870	1,737	906	-12.5
Total	8,483	8,233	7,993	7,081	6,210	6,812	6,655	5,961	4,563	5,705	5,533	7,653	5,637	-14.6
NATURAL GAS PROD/WELL (MCFPD)														
North	131	133	120	119	101	103	97	94	93	94	89	111	92	-16.5
South	1,922	1,819	1,609	1,524	1,358	1,353	1,269	1,283	1,234	1,224	1,188	1,449	1,215	-16.2
Offshore	2,838	2,575	2,038	1,842	1,744	1,737	1,596	1,820	1,622	1,560	1,549	1,825	1,577	-13.5
NATURAL GAS COMPLETIONS														
North	722	989	1,301	1,212	1,021	166	125	126	30	45	47	234	110	-41.8
South	345	342	322	352	381	94	107	97	28	27	29	83	84	1.2
Offshore	43	30	40	31	39	10	11	12	0	2	2	6	4	-33.3
Total	1,110	1,361	1,663	1,595	1,441	290	243	235	58	74	92	323	224	-30.6
NATURAL GAS PRICES ($/MCF)														
Interstate 1-	0.91	1.18	1.59	1.98	3.72	3.63	3.78	3.96	4.32	4.33	4.23	3.59	4.29	19.4
Intrastate (A) 2	1.76	2.14	2.70	3.40	3.71	3.69	3.74	3.73	3.80	3.84	3.82	3.68	3.82	3.8
Intrastate (B) 2	1.39	1.66	2.06	2.56	2.80	2.78	2.82	2.81	2.86	2.89	2.88	2.78	2.87	3.2
CRUDE OIL PRODUCTION (MBPD) - Ave.														
North	86.4	78.7	79.1	83.5	86.3	86.3	86.6	85.8	82.8	84.1	84.5	86.4	83.8	- 3.0
South	414.9	356.8	318.9	283.2	259.8	268.5	263.1	264.0	245.1	253.5	256.4	262.6	252.8	- 4.0
Offshore	79.3	77.2	67.8	65.4	60.2	63.4	62.9	57.7	59.4	58.0	60.6	61.7	59.3	- 3.9
Total	580.6	506.7	465.9	432.2	406.4	417.9	412.7	407.5	388.3	395.6	401.5	410.7	395.1	- 3.7
ELECTRICITY PRODUCTION (Gigawatts)														
Gas generated	36,921	38,394	40,955	39,948	35,539	9,367	7,973	7,442	2,269	1,885	1,626	8,812	5,780	-34.4
Oil generated	14,283	8,260	4,278	2,635	940	471	47	41	0	0	0	361	0	-100.0
Coal generated	0	0	0	0	1,928	5,938	1,036	1,956	1,736	577	590	591	268	1,758	555.9
Total generation	51,204	46,654	45,233	44,111	43,232	10,894	13,058	9,239	2,946	2,475	2,217	9,481	7,038	+20.4
REFINERY RUNS (MMBPD)-Ave.	1.85	1.92	1.7	1.73	1.72	1.73	1.71	1.78	1.68	1.33	1.67	1.62	1.56	- 3.7
CRUDE OIL STOCK-MMBBls.)-Ave.	13.5	13.5	16.4	13.01	12.08	12.06	13.28	12.38	11.3	12.6	12.1	10.0	12.0	20.0

1. Industrial Sale Price by Major Interstate Pipeline Companies
2. Intrastate A price was computed as the weighted average price charged by Louisiana Intrastate, Monterey, and Sugar Bowl gas transmission companies. Intrastate B was computed by adding Texaco (27¢ market share at 38¢ MCF) to Intrastate A. Data on Texaco was taken from Foster and Associates' The Impact of NGPA on Intrastate Markets in Louisiana 1982. Data on the other three companies was supplied by the Louisiana Public Service Commission.



Consumption

Indicator	1978	1979	1980	1981	1982	1982.2	1982.3	1982.4	Jan	Feb	Mar	Year To Date Through Last Month Reported 1982	Year To Date Through Last Month Reported 1983	Percent Change
GASOLINE CONSUMPTION (Millions Gal.)														
Louisiana	2,157	2,158	2,013	2,103	2,143	564	548	538	159	150	193	514	502	- 2.3
U.S.	116,780	112,628	106,340	104,156	102,886	26,365	26,902	25,621	7,795	7,681	-	15,334	15,476	+ 0.9
ELECTRICITY CONSUMPTION (Gigawatts)														
Residential	16,024	16,082	17,459	18,119	12,978	3,929	2,642	3,855	1,263	1,240	1,088	3,641	3,591	- 1.3
Comercial	8,579	8,670	9,238	9,592	9,234	2,414	2,387	2,193	736	726	703	2,163	2,260	+ 4.5
Industrial	21,992	24,420	25,175	26,318	22,713	6,301	6,279	6,130	2,018	1,888	1,723	5,984	5,629	- 5.9
Other	3,612	3,720	3,753	4,117	3,737	1,036	1,108	987	347	309	324	921	980	6.0
Total	50,157	52,892	55,513	58,147	48,662	13,680	13,070	13,165	4,364	4,164	3,838	12,709	12,366	- 2.6

Energy Economics

Indicator	1978	1979	1980	1981	1982	1982.2	1982.3	1982.4	Jan	Feb	Mar	Year To Date Through Last Month Reported 1982	Year To Date Through Last Month Reported 1983	Percent Change
ELECTRICITY PRICES (¢/kwh)														
Residential														
CLECO	4.2	4.5	5.1	6.0	7.1	6.7	6.8	7.5	6.7	6.6	7.1	5.9	6.8	15.2
GSU	3.3	3.8	4.1	5.1	5.6	5.4	5.9	6.2	6.0	6.1	6.4	5.9	6.1	24.4
LP&L	2.6	3.0	4.1	5.2	5.7	5.4	5.8	5.9	5.8	5.7	5.8	5.3	5.8	9.4
NOPSI	4.3	4.7	5.3	6.0	6.3	6.3	6.2	6.5	6.2	5.9	6.2	6.1	5.9	-3.2
SWEPCO 3	3.5	3.8	3.7	3.9	5.0	4.5	5.0	5.8	5.3	5.3	5.2	5.6	5.3	47.2
Commercial														
CLECO	4.3	4.6	5.3	5.9	6.9	6.5	6.3	7.4	7.1	6.9	7.4	6.2	7.1	14.5
GSU	3.0	3.5	3.9	4.5	4.9	4.7	4.3	5.4	5.8	5.8	5.9	4.3	5.8	34.8
LP&L	2.6	3.2	4.1	5.5	5.8	5.5	6.0	6.2	6.2	6.1	6.1	5.6	6.1	8.9
NOPSI	4.3	4.9	5.2	6.4	6.7	6.7	6.5	6.5	6.3	6.3	6.4	6.3	6.3	-1.5
SWEPCO 3	2.5	2.5	3.2	3.3	4.2	3.8	4.3	5.1	4.9	4.9	4.8	5.0	4.9	53.1
Industrial														
CLECO	2.8	3.1	3.8	4.6	5.4	5.3	5.5	5.8	5.8	5.5	5.5	4.7	5.2	10.6
GSU	1.9	2.4	2.7	3.7	3.6	3.6	3.4	3.9	4.0	4.0	4.1	3.0	4.0	33.3
LP&L	1.5	1.9	3.0	4.0	4.4	4.1	4.6	4.6	4.6	4.7	5.1	4.2	4.8	14.3
NOPSI	3.1	3.6	3.9	5.0	5.4	5.4	5.4	5.5	5.2	5.1	5.1	5.2	5.1	-1.9
SWEPCO 3	2.0	2.0	2.8	2.9	4.2	3.3	4.2	4.8	4.4	4.5	4.3	2.7	4.4	62.9
WELL HEAD PRICE OF CRUDE OIL ($Bbl. - Ave.)	9.28	15.66	24.32	31.85	28.50	27.81	28.19	28.52	27.22	26.43	25.82	29.64	26.49	-10.6
GAS/LINE PRICES (Ave. ¢/Gal.)														
New Orleans Ave. Retail Pump	66.43	100.67	113.57	131.3	124.2	121.0	127.7	124.0	117.9	115.4	114.0	124.9	115.7	-7.3
U.S. Ave. Retail Pump	65.36	98.11	119.87	131.1	127.9	123.1	128.2	129.9	118.0	114.9	112.7	126.4	115.2	-8.8
EMPLOYMENT (Ave.)														
Oil and gas production (SIC 13)	73,244	78,172	90,112	94,721	95,552	95,535	89,101	92,650	91,200	90,600	90,200	100,380	90,666	-9.6
Chemical and allied products (SIC 28)	31,469	32,796	33,166	32,667	32,410	34,340	33,846	31,350	32,000	31,700	31,500	34,579	31,731	-8.2
Petroleum Refining (SIC 29)	11,719	13,127	13,673	14,314	13,166	13,179	13,218	12,800	12,900	13,000	12,900	14,098	12,933	-8.2
WAGES - ($Million$)														
Oil and gas production (SIC 13)	3901	4491	5801	7317	-	1986	1873	-	-	-	-	-	-	-
Chemical and allied products (SIC 28)	2040	2296	2635	2831	-	793.2	803.7	-	-	-	-	-	-	-
Petroleum refining (SIC 29)	763	872	1083	1418	-	306.3	311.8	-	-	-	-	-	-	-

3. Reflects rate increase granted SWEPCO by the PSC April 19, 1982

Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Summer 1983

Comparing Energy Units: Equivalents

Energy sources, such as coal, natural gas, and crude oil, are measured in physical units. Oil is measured in barrels, coal in short tons (usually reported as "tons"), and natural gas in cubic feet.

In order to compare their heat (thermal) content, coal, natural gas, and crude oil are measured in *calories* and *Btu's*. The *calorie* is the amount of energy required to raise the temperature of 1 gram of water 1° centigrade. A *Btu* is the amount of energy necessary to raise the temperature of 1 pound of water 1° Fahrenheit. One Btu equals approximately 202 calories.

Table 2 shows selected energy equivalents used in this publication.

Common Energy Measures and Equivalents

Measurements and equivalents can be difficult and confusing, especially for the lay person. This difficulty is compounded by the common practice of using acronyms to express measures.

Table 1 shows many acronyms and measures which will be used in the *Louisiana Energy Indicators*.

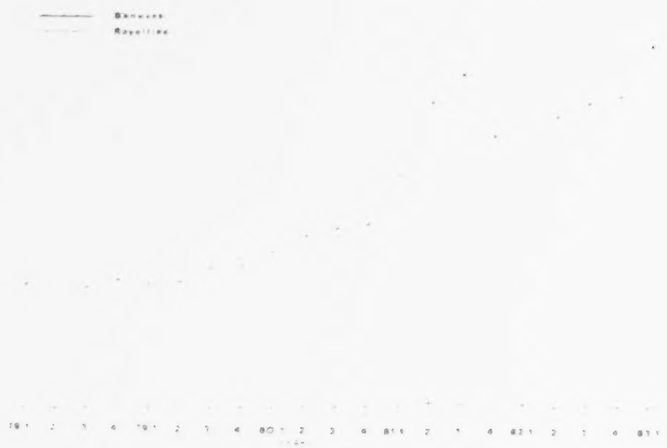
Table 1. Common Energy Acronyms and Measures

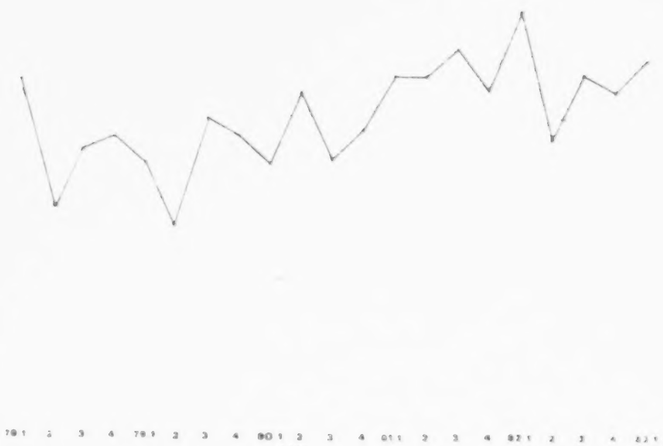
Btu—British Thermal Unit; 1 Btu equals 0.293 watthour or approximately 202 calories.
Bbl—barrels.
MB—thousand barrels.
MMB—million barrels.
Mcf—thousand cubic feet.
MMcf—million cubic feet
Tcf—trillion cubic feet.
MBPD—thousand barrels per day.
MMBPD—million barrels per day.
McfPD—thousand cubic feet per day.
MMcfPD—million cubic feet per day.
W—watt; equals the rate of energy use or conversion when about 0.25 calorie is used or converted per second.
KW—kilowatt; equals 1000 watts.
MW—megawatt; equals 100 kW (1 million watts).
GW—gigawatt; equals 1 million kW (1 billion watts).

Wh—watthour; equals 1 watt of power supplied to or taken from an electric circuit steadily for 1 hour.
kWh—kilowatthour; equals 1 thousand watthours.
MWh—megawatt; equals 1 million watthours.
GWh—gigawatthour; equals 1 million kilowatthours.

Table 2. Selected Energy Equivalents (Adapted from *Annual Energy Review 1982*)

Energy Unit	Bbl's Crude Oil	Tons of Bituminous Coal	Tons of Lignite	Mcf Natural Gas	100 kWh Electricity	Million Btu
1 Bbl crude oil	—	0.24	0.44	5.7	1.75	5.8
1 short ton bituminous	4.13	—	1.84	23.5	7.27	24.0
1 short ton lignite	2.24	0.54	—	12.74	3.9	13.0
1 Mcf natural gas	0.18	0.04	0.07	—	300.0	1.02
1000 kWh electricity	0.59	0.13	0.26	3300.0	—	3.3





Historical Presentation—Revenues

Indicators	77.1	77.2	77.3	77.4	78.1	78.2	78.3	78.4	79.1	79.2	79.3	79.4	80.1
PRINCIPAL ENERGY RELATED STATE REVENUES (Millions $)													
Severance - oil and condensate	66.18	66.35	66.18	64.80	62.88	66.17	67.51	66.99	62.96	64.48	76.10	73.04	86.68
Severance - natural gas	51.68	52.41	50.93	52.16	49.37	50.31	49.07	47.36	45.96	49.39	46.02	46.02	41.38
Bonuses	6.27	0	2.91	9.83	68.67	9.01	8.48	10.49	15.27	12.86	43.17	35.46	16.81
Rentals	1.05	2.04	1.44	9.09	2.72	.59	2.21	2.97	8.16	4.05	4.80	5.17	8.02
Royalties	38.47	38.44	40.02	48.19	44.82	34.51	44.00	46.77	45.23	46.06	51.29	51.87	57.15
Special fuels tax	3.97	4.29	4.43	4.61	4.49	5.17	5.11	5.31	5.11	5.68	5.42	5.97	5.24
Gasoline tax	37.41	41.41	42.14	40.59	38.67	43.53	45.08	42.77	40.80	30.06	43.02	42.68	38.50
Public utilities tax	3.01	3.13	3.40	3.50	3.55	3.67	3.97	3.88	4.41	4.36	8.41	4.96	4.99
Natural gas franchise tax	1.25	1.27	1.13	.98	1.17	1.42	1.19	1.15	1.27	1.44	.97	1.08	1.65
Total	209.29	209.34	212.55	233.75	276.34	215.38	226.6	227.69	229.17	218.3	279.2	266.25	260.42
TOTAL STATE REVENUES (Millions $)	437.8	569.5	496.2	521.0	602.6	648.4	597.2	571.0	619.7	713.1	669.2	667.5	706.2
ENERGY RELATED REVENUES AS % OF STATE TOTAL	47.8	36.76	42.48	44.86	45.85	33.2	37.9	39.87	36.98	30.6	41.72	39.88	36.88

Indicators	80.2	80.3	80.4	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1
PRINCIPAL ENERGY RELATED STATE REVENUES (Millions $)												
Severance - oil and condensate	99.20	118.92	123.06	166.65	230.39	215.16	203.12	209.65	181.36	194.68	191.14	188.52
Severance - natural gas	41.25	38.73	42.63	40.85	40.65	43.52	39.23	40.16	36.52	34.79	36.05	36.59
Bonuses	180.21	2.93	20.08	40.46	38.85	46.14	29.21	27.93	17.07	9.31	12.83	10.53
Rentals	5.56	10.85	7.13	11.20	10.54	11.26	13.40	15.32	14.13	12.31	11.92	10.45
Royalties	62.80	65.51	67.16	84.76	110.58	120.69	98.63	153.97	105.58	110.42	112.74	130.99
Special fuels tax	5.77	6.03	5.86	5.68	6.29	6.01	6.77	6.09	6.56	6.31	6.57	6.06
Gasoline tax	40.90	41.66	40.38	40.67	41.21	38.70	45.03	40.14	41.25	40.81	40.09	36.69
Public utilities tax	5.17	5.62	5.80	5.84	6.25	6.58	6.91	6.85	6.92	7.15	6.96	7.56
Natural gas franchise tax	1.97	1.32	1.35	1.89	2.71	1.61	1.55	2.39	2.77	2.11	2.34	3.31
Total	442.83	289.57	313.45	398	487.47	489.67	443.85	502.5	412.16	417.89	420.64	430.7
TOTAL STATE REVENUES (Millions $)	994.1	774.8	773.0	860.3	1,054.4	994.8	990.7	943.0	1,041.1	898.1	942.5	897.1
ENERGY RELATED REVENUES AS % OF STATE TOTAL	48.01	44.54	37.37	40.54	46.26	46.23	49.22	44.80	53.27	33.58	46.5	44.63

SOURCES OF LOUISIANA ENERGY INDICATOR DATA

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Hughes Tool Company as cited in *World Oil*.
Monthly Active Rigs Running

Louisiana Climatological Data. U.S. Dept. of Commerce. National Weather Service. Monthly.
Heating and Cooling Degree Days (Not in this issue)

Labor Market Information. Louisiana Dept. of Labor. Office of Employment Security. Research and Statistics Unit. Monthly.
Employment Data

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Monthly Energy Review. U.S. Dept. of Energy. Energy Information Administration. Monthly.
Crude Oil Prices, Interstate Natural Gas Price Data

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Gasoline Consumption

Oil and Gas Journal. Penn Well Publishing Company. Tulsa, Oklahoma.
Gasoline Prices

Weekly Petroleum Status Report. U.S. Dept. of Energy. Energy Information Administration.
Crude Oil Prices

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Louisiana Public Service Commission. (Unprinted Data).
Electricity Prices, Natural Gas Prices

Louisiana Department of Revenue. AM08 Revenue Projections Model. Monthly Monitoring Report. (Mimeograph).
Taxes and Revenues

Louisiana State Planning Office. (Unprinted Data).
Total State Revenues

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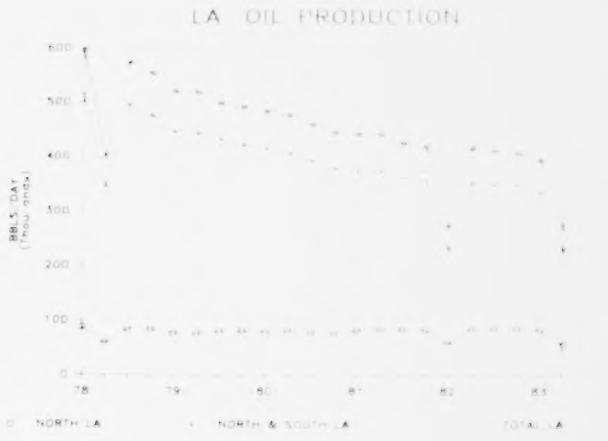
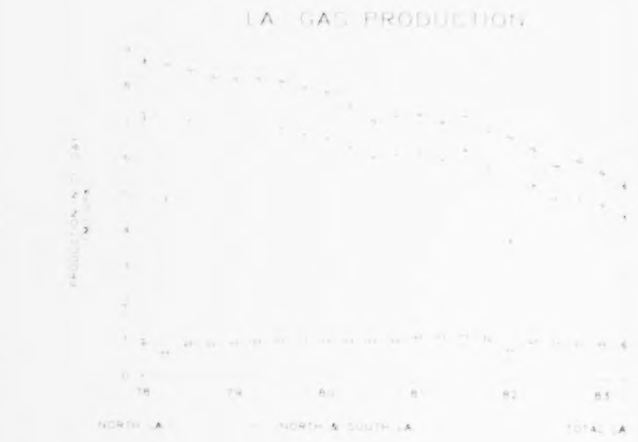
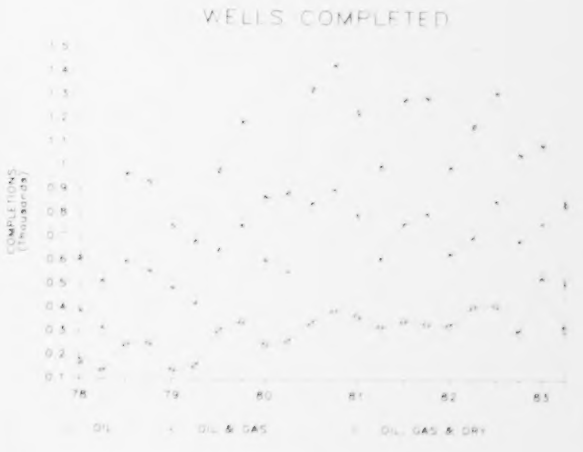


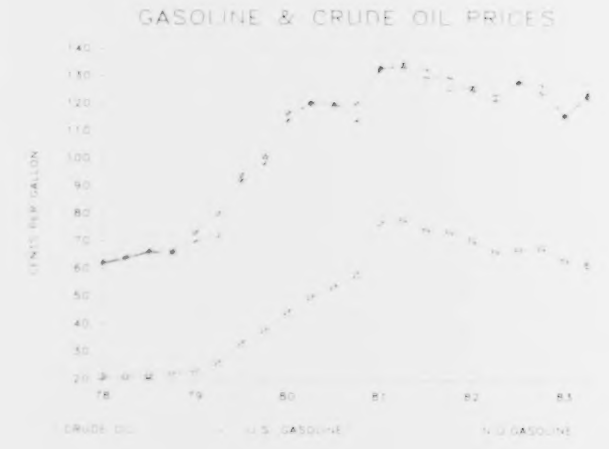


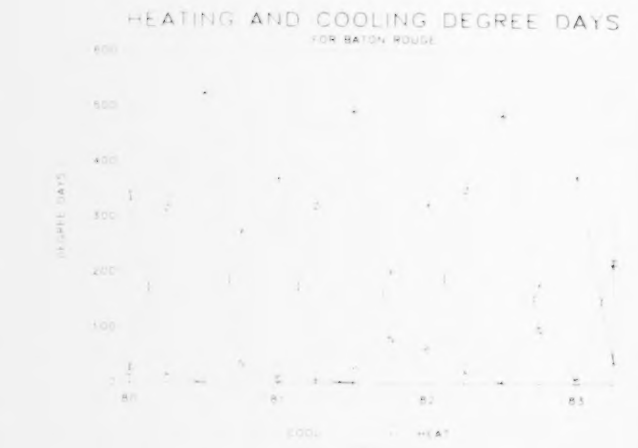
Figures represent total
except when otherwise noted

Indicator	1978	1979	1980	1981	1982	1982.3	1982.4	1983.1	Apr	May	June	1983.2	Year Last 1982	To Date Through Month Reported 1983	Percent Change
OIL WELLS COMPLETED															
North	493	641	926	1,034	1,173	321	203	393	66	81	84	231	574	624	8.7
South	304	272	292	317	339	81	89	144	20	29	30	79	169	223	31.9
Offshore	42	28	20	18	24	13	6	2	1	2	1	4	5	6	20.0
Total	839	941	1,238	1,369	1,536	415	298	539	87	112	115	314	748	853	14.0
GAS WELLS COMPLETED															
North	722	989	1,301	1,212	1,021	325	276	136	53	33	37	123	420	259	-38.3
South	345	342	322	352	381	107	97	84	20	14	20	54	177	138	-22.0
Offshore	43	30	40	31	39	11	12	4	3	8	2	13	16	17	6.2
Total	1,110	1,361	1,663	1,595	1,441	443	385	224	76	55	59	190	613	414	-32.4
DRY HOLES DRILLED															
North	589	575	822	893	988	265	210	151	48	52	61	161	515	312	-39.1
South	649	680	733	895	734	182	151	166	52	46	39	135	401	301	-24.9
Offshore	18	36	51	52	38	13	4	15	3	3	5	11	21	26	23.8
Total	1,256	1,291	1,606	1,840	1,760	460	365	332	103	99	105	307	937	639	-31.6
ACTIVE RIGS - WILDCATTING (Ave.)															
North	20	18	34	33	10	9	8	7	5	5	2	4	11	6	-45.5
South	46	38	68	59	32	23	23	39	22	28	25	25	41	32	-21.9
Offshore	2	4	7	6	3	2	4	6	3	6	5	5	2	6	200.0
Total	68	60	105	98	45	34	35	52	30	39	32	34	68	44	-54.5
ACTIVE RIGS (Ave. End of Month)[1] (DNR)															
North	75	74	103	119	164	159	184	100	49	36	53	46	156	46	-70.5
South	190	185	244	249	161	161	138	149	127	118	93	113	191	113	-40.8
Offshore	9	14	17	18	12	13	12	13	12	11	12	12	14	12	-14.3
Total	274	273	364	386	337	333	334	262	188	165	158	171	361	171	-52.6
RUNNING RIGS (Ave. Hughes Tool Co.)															
North	29	35	52	59	40	27	35	34	22	24	19	22	48	28	-41.6
South	133	169	171	243	168	134	130	143	119	105	119	114	202	129	-25.2
Total	162	204	223	302	208	161	165	177	141	129	138	136	250	157	-37.2

Production, Consumption & Prices



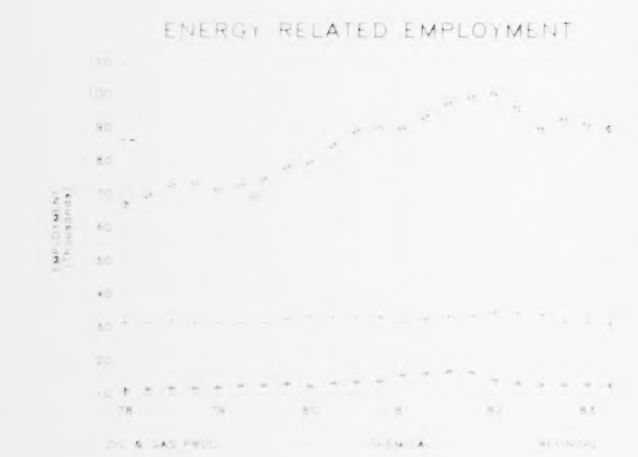




Figures represent total
except when otherwise noted

Indicator	1978	1979	1980	1981	1982	1982.3	1982.4	1983.1	Apr	May	June	1983.2	Year Last 1982	To Date Through Month Reported 1983	Percent Change
NATURAL GAS PRODUCTION (MMCFPD)															
North	908	979	1,000	1,135	1,032	1,990	927	961	836	812	787	811	1,082	886	-18.1
South	6,235	5,845	5,275	4,921	4,195	3,952	4,000	3,830	3,198	3,175	3,117	3,163	4,406	3,496	-20.6
Offshore	1,340	1,309	1,118	1,025	983	913	1,036	886	754	747	806	769	991	828	-16.4
Total	8,483	8,133	7,393	7,081	6,210	6,855	5,963	5,677	4,788	4,734	4,710	4,743	6,479	5,210	-19.6
NATURAL GAS PROD/WELL (MCFPD)															
North	131	133	120	119	101	97	94	92	80	80	76	79	108	86	-20.3
South	1,922	1,819	1,609	1,524	1,338	1,269	1,283	1,215	1,037	1,038	1,030	1,035	1,401	1,125	-19.7
Offshore	2,838	2,575	2,038	1,842	1,744	1,596	1,820	1,577	1,378	1,360	1,476	1,405	1,781	1,491	-16.2
CRUDE OIL PRODUCTION (MBPD) - Ave.															
North	86.4	78.7	79.1	83.5	86.3	86.6	85.8	83.8	84.4	80.6	78.8	81.3	86.4	82.6	-4.3
South	414.9	356.8	318.9	283.2	259.8	263.1	264.0	252.0	258.7	262.4	258.6	259.2	265.3	255.6	-3.6
Offshore	79.3	71.2	67.9	69.4	60.2	62.9	57.7	59.3	64.8	64.4	65.5	64.9	62.5	62.1	-0.6
Total	580.6	506.7	465.9	432.1	406.3	412.6	407.5	395.1	407.9	407.4	402.9	405.4	414.2	400.3	-3.4
REFINERY RUNS (MMBPD)-Ave.	1.85	1.92	1.7	1.73	1.72	1.71	1.78	1.56	1.61	1.74	1.70	1.68	1.67	1.62	-2.9
CRUDE OIL STOCK (MMBbls.)-Ave.	13.5	13.5	16.4	13.01	12.08	13.28	12.38	12.0	13.57	14.83	13.07	13.82	11.07	12.91	16.7
WELL HEAD PRICE OF CRUDE OIL ($Bbl. - Ave.)	9.28	15.88	24.32	31.85	28.50	28.19	28.52	26.57	25.82	25.98	25.79	25.86	28.72	26.26	-8.9
GASOLINE PRICES (Ave. ¢/Gal.)															
New Orleans Ave. Retail Pump	66.43	100.67	113.57	131.3	124.2	127.7	124.0	115.7	120.0	125.8	125.7	123.8	122.9	119.7	-2.6
U.S. Ave. Retail Pump	65.38	98.11	119.87	131.1	127.9	128.2	129.9	115.2	420.1	123.8	123.8	222.6	124.8	118.9	-4.7
NATURAL GAS PRICES ($/MCF)															
Interstate[3]	0.91	1.18	1.59	1.98	3.72	3.78	3.96	4.29	4.37	4.25	4.22	-	3.42	4.31	26.0
Intrastate (A)[4]	1.76	2.14	2.70	3.40	3.71	3.74	3.73	3.82	3.80	3.72	3.72	3.74	3.69	3.78	2.4
Intrastate (B)	1.39	1.46	2.06	2.56	2.80	2.82	2.81	2.87	2.86	2.80	2.81	2.82	2.78	2.85	2.4
GASOLINE CONSUMPTION (Millions Gal.)															
Louisiana	2,157	2,158	2,013	2,103	2,143	548	518	502	180	189	206	575	1,078	1,077	0.0
U.S.	116,780	112,628	106,340	104,158	102,886	26,302	25,621	24,584	-	-	-	-	23,978	24,584	1.3

Prices, Employment, & Revenues



Figures represent total
except when otherwise noted

Indicator	1978	1979	1980	1981	1982	1982.3	1982.4	1983.1	Apr	May	June	1983.2	Year Last 1982	To Date Through Month Reported 1983	Percent Change
ELECTRICITY PRICES (¢/KwH)															
Residential															
CLECO	4.1	4.6	5.3	6.0	6.1	6.8	7.5	6.8	7.1	6.8	6.4	7.4	6.8	7.1	12.1
GSU	5.3	5.8	6.3	7.1	7.6	8.9	8.6	8.1	8.2	8.4	8.2	8.4	8.3	8.3	21.25
LP&L	2.5	3.0	4.7	5.2	5.7	5.9	5.9	5.8	5.8	6.7	5.7	6.0	5.4	5.9	9.2
NOPSI	4.1	4.7	5.8	6.0	6.4	6.2	6.5	5.9	5.7	5.7	5.9	5.8	6.2	5.9	-4.8
SWEPCO[2]	3.0	3.0	3.2	3.8	5.2	5.3	5.8	5.3	5.5	5.9	6.1	5.8	4.0	5.6	40.0
Commercial															
CLECO	4.3	4.6	5.3	5.9	6.4	6.3	7.4	7.7	7.4	7.4	8.4	7.7	6.4	7.3	13.9
GSU	3.8	4.5	5.4	6.5	6.9	6.5	6.4	5.8	6.0	6.3	5.3	5.9	6.5	5.9	35.1
LP&L	2.6	3.2	4.1	5.5	5.8	6.0	6.2	6.1	5.8	5.9	5.4	5.8	5.6	6.6	6.5
NOPSI	4.3	4.9	5.8	6.4	6.7	6.5	6.9	6.5	6.1	6.0	6.2	6.1	6.7	6.6	-1.4
SWEPCO[2]	2.5	2.5	3.2	3.3	4.2	4.3	5.3	4.9	5.0	5.0	5.2	5.1	3.5	5.0	42.8
Industrial															
CLECO	3.8	3.7	5.6	4.6	5.4	5.3	5.6	5.2	5.6	5.6	5.5	5.6	5.0	5.4	8.0
GSU	3.4	3.4	4.1	5.1	5.6	5.4	5.5	4.0	4.0	3.7	3.5	3.7	4.3	3.9	16.4
LP&L	1.5	1.9	3.0	4.0	4.4	4.4	4.6	4.8	4.4	4.5	4.5	4.5	4.2	4.7	10.7
NOPSI	3.1	3.6	5.4	5.0	5.4	5.4	5.5	5.1	4.8	4.8	5.1	4.9	5.3	5.0	-5.7
SWEPCO[2]	2.0	2.0	2.8	2.9	4.1	4.2	4.8	4.4	4.5	4.5	4.8	4.6	3.6	4.5	50.0
EMPLOYMENT (Ave.)															
Oil and gas production (SIC 291)	75.24	78.12	90.11	94.72	93.55	89.10	92.65	90.66	89.9	89.6	89.0	89.5	97.95	90.08	-8.0
Chemical and allied products (SIC 28)	31.46	32.74	33.16	32.66	32.41	33.84	31.35	31.73	31.0	31.1	30.9	31	34.45	31.36	-9.0
Petroleum Refining (SIC 29)	11.31	13.12	13.87	14.41	13.16	12.71	12.80	12.93	12.8	12.9	12.7	12.8	13.63	12.67	-7.4
PRINCIPAL ENERGY RELATED STATE REVENUES ($Millions $)															
Severance - oil and condensate	263.50	274.58	427.46	815.32	776.83	194.68	191.74	188.52	50.23	48.33	55.44	154.0	340.4	342.1	-12.6
Severance - natural gas	194.11	187.39	161.99	164.25	147.52	34.79	36.05	36.59	7.55	11.47	12.67	31.69	76.6	68.3	-10.8
Bonuses	96.65	104.76	220.03	194.46	67.14	9.31	12.83	10.53	2.04	1.13	6.57	9.74	44.9	20.3	-54.9
Rentals	8.47	22.19	31.56	96.40	53.68	12.31	11.92	10.45	2.15	2.89	2.33	7.37	29.4	17.8	-39.3
Royalties	120.10	144.43	252.62	474.66	482.71	110.42	112.74	130.99	33.80	39.16	50.96	103.92	259.4	234.9	-9.4
Special fuels tax	20.06	22.16	22.90	24.75	25.53	6.31	6.57	6.06	2.20	2.09	2.56	6.85	12.5	12.9	3.2
Gasoline tax	170.05	156.56	161.44	165.61	162.29	40.81	40.09	36.69	13.51	14.21	13.14	40.86	81.3	77.5	-4.8
Public utilities tax	15.07	22.14	21.56	25.58	27.88	7.15	6.96	7.56	0.74	5.67	0.86	7.27	13.8	14.7	6.5
Natural gas franchise tax	4.93	4.76	6.29	7.76	9.61	2.11	2.34	3.31	3.37	0.05	0.37	3.79	5.0	7.1	44.0
TOTAL ENERGY REVENUES (Million $)	941.01	992.39	1,306.27	1,818.99	1,753.19	417.89	421.24	430.70	115.59	125.00	124.90	365.43	913.6	796.2	-13.8
TOTAL STATE REVENUES (Millions $)	2,419.2	2,769.5	3,248.1	3,000.2	3824.9	898.1	942.5	897.1	193.5	322.4	223.8	739.7	1,984.3	1,636.3	-17.5
ENERGY RELATED REVENUES AS % OF STATE TOTAL	39.0	43.8	40.2	60.6	45.8	46.5	44.7	48.0	59.7	38.8	55.8	49.4	46.1	47.0	2.6

Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Fall 1983

FUEL CONVERSION AND VALUE

Commercial generation of electrical power in Louisiana began in 1881. Over the past century, its importance in our homes and workplaces has become so pervasive that what was once a luxury is now indispensable to our daily lives.

The thermal generation of electricity relies on a primary energy source, such as coal, oil, natural gas, or uranium. To compare their efficiencies in the generation process, it is important to compare the heat and dollar value of each fuel. The prices of these fuels, however, are usually quoted per physical unit (dollars per barrel of oil, ton of coal, or thousand cubic feet of natural gas). Because these units are not easily compared, the heat value of each fuel is expressed in a standard unit, such as a calorie or British thermal unit (Btu). A calorie (a metric measure) is the amount of heat required to raise the temperature of one gram of water by one degree Centigrade. A Btu is the amount of heat required to raise the temperature of a pound of water by one degree Fahrenheit. One Btu equals about 252 calories. The Btu values of major fuels are given in Table 2 along with their cost, expressed in cents per million Btu's.

In thermal generation processes (as opposed to hydroelectric generation), the fuel is used to heat water to produce steam which, in turn, drives the turbines which produce electricity. Electricity is measured in watts or watthours (which tell the amount of work that can be done by the electricity). It takes approximately 10,000 Btu's of fossil fuel to produce 1,000 watthours (1 kilowatthour) of electricity. When delivered to the user, this same amount of electricity can produce only 3,412 Btu's of heat. Evaluated in this manner, two-thirds of the heat value of the primary fuel is lost in the generation and transmission processes.

Table 2. Fossil Fuel Heat and Dollar Value Comparisons, December 1982

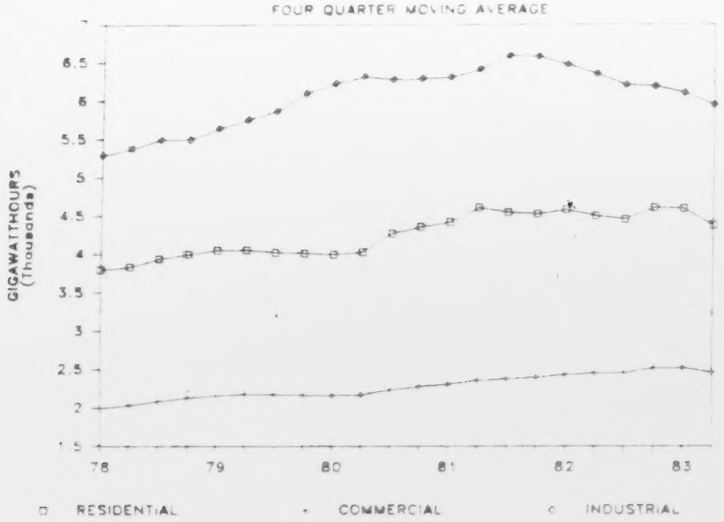
Fuel	Btu Content	Average Cost to Electric Utilities	Cost per 10 million Btu 10^6 Btu
1 barrel crude oil	5.8 million	$25.79 per Bbl	$4.45
1 short ton coal	22.59 million	$38.72 per Ton	$2.30
1 Mcf gas	1.021 million	$3.21 per Mcf	$3.14

Source: *Electric Power Monthly*, December 1982

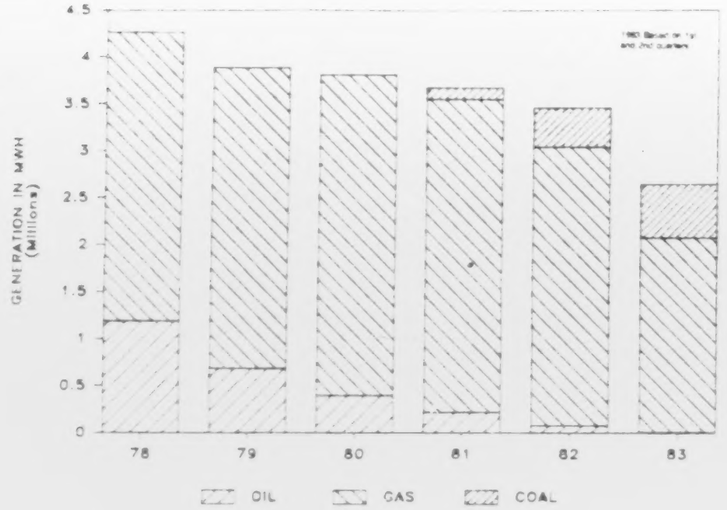
Table 1. Selected Energy Equivalents (Adapted from *Annual Energy Review 1982*)

Energy Unit	Bbls Crude Oil	Tons of Bituminous Coal	Tons of Lignite	Mcf Natural Gas	1000 kWh Electricity	Million Btu
1 Bbl crude oil =	—	0.24	0.45	5.7	1.70	5.8
1 short ton bituminous =	4.14	—	1.85	23.5	7.04	24.0
1 short ton lignite =	2.24	0.54	—	12.74	3.80	13.0
1 Mcf natural gas =	0.18	0.04	0.08	—	.3	1.02
1000 kWh electricity =	0.59	0.14	0.26	3.34	—	3.4

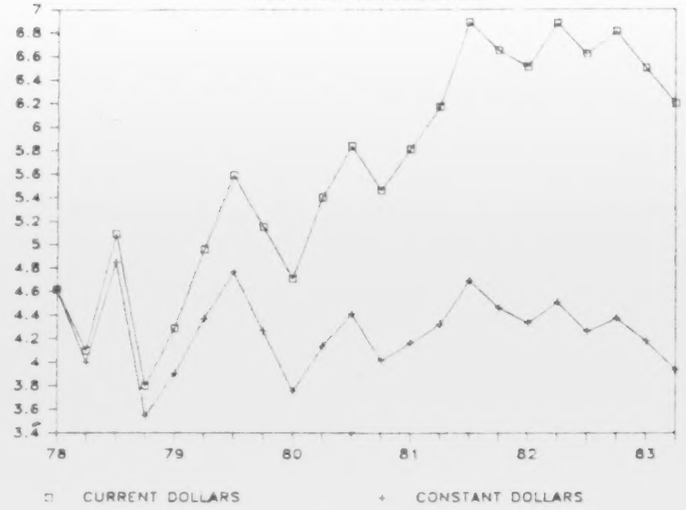
ELECTRICITY SALES BY CUSTOMER CLASS



ELECTRICITY GENERATION BY FUEL TYPE



ELECTRICITY PRICES PER KILOWATT HOUR



Historical Presentation—Electricity

	77.1	77.2	77.3	77.4	78.1	78.2	78.3	78.4	79.1	79.2	79.3	79.4	80.1
ELECTRICITY PRODUCTION (Gigawatts)													
Gas generated	7.01	8.54	11.12	8.51	7.15	9.29	11.75	11.81	8.08	10.59	11.28	8.42	8.99
Oil generated	3.91	3.47	3.38	2.47	4.47	3.44	3.69	2.65	3.27	1.57	1.18	1.51	1.15
Coal generated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total generation	10.92	12.01	14.50	10.98	11.62	12.73	15.44	14.46	11.35	12.16	12.46	9.93	10.14
RETAIL Residential PRICE/ KWH (¢) New Orleans	4.52	4.57	4.71	3.96	4.62	4.10	5.09	3.80	4.29	4.96	5.59	5.15	4.71
ELECTRICITY CONSUMPTION (Gigawatts)													
Residential	2.62	3.23	5.71	3.23	3.02	3.38	6.13	3.79	3.23	3.39	6.00	3.44	3.16
Commercial	1.62	1.89	2.39	1.89	1.79	2.04	2.60	2.08	1.91	2.11	2.58	2.05	1.90
Industrial	4.88	8.24	5.35	5.33	5.22	5.60	5.83	5.33	5.80	6.06	6.29	6.25	6.31
Other	0.77	0.86	0.92	0.88	0.80	0.89	0.98	0.92	0.93	0.99	0.86	0.93	0.88
Total	9.89	14.22	14.37	11.33	10.83	11,91	15.54	12.12	11.87	12.55	15.73	12.67	12.25

	80.2	80.3	80.4	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2
ELECTRICITY PRODUCTION (Gigawatts)													
Gas generated	9.46	12.67	9.78	8.53	10.49	11.93	8.97	8.83	9.38	9.91	7.46	5.78	6.64
Oil generated	1.51	1.66	0.46	1.22	0.52	0.82	0.07	0.38	0.47	0.04	0.04	0	0.02
Coal generated	0	0	0	0.06	0.52	0.73	0.21	0.26	1.03	1.95	1.73	1.75	1.66
Total generation	10.97	14.33	10.24	9.81	11.53	13.48	9.25	9.47	10.88	11.90	9.23	7.53	8.32
RETAIL RESIDENTIAL PRICE/ KWH (¢) New Orleans	5.40	5.84	5.46	5.81	6.17	6.89	6.65	6.51	6.88	6.62	6.81	6.50	6.20
ELECTRICITY CONSUMPTION (Gigawatts)													
Residential	3.51	6.97	3.79	3.40	4.26	6.73	3.70	3.64	3.92	6.56	3.85	3.59	3.53
Commercial	2.12	2.87	2.22	2.01	2.32	2.97	2.28	2.16	2.41	2.98	2.39	2.16	2.31
Industrial	6.39	6.16	6.30	6.38	6.79	6.86	6.26	5.98	6.30	6.27	6.13	5.63	5.77
Other	0.92	1.00	0.93	0.99	1.04	1.11	1.03	0.92	1.03	1.10	0.98	0.98	1.00
Total	12.94	17.00	13.24	12.78	14.41	17.67	13.27	12.70	13.66	16.91	13.35	12.36	12.62

FOOTNOTES

1. A change in DNR surveying practices is partially responsible for the drop in the number of rigs in 1983, especially in the north.

2. Reflects rate increase granted SWEPCO by the PSC, April 19, 1982.

3. Industrial Sale Price by Major Interstate Pipeline Companies.

4. Intrastate A price was computed as the weighted average price charged by Louisiana Intrastate, Monterey, and Sugar Bowl gas transmission companies. Intrastate B was computed by adding Texaco (27% market share at 34¢/MCF) to Intrastate A. Data on Texaco was taken from Foster and Associates, The Impact of NGPA on Intrastate Markets in Louisiana, 1982. Data on the other three companies was supplied by the Louisiana Public Service Commission.

5. Heating degree days are deviations of the mean daily temperature below 65°F.
Cooling degree days are deviations of the mean daily temperature above 65°F.
(Ex. When a recorded mean daily average is 80°F, cooling degreedays would be 15 and heating degree days, 0; for a 40°F, heating degreedays would be 25 and cooling degreedays, 0.)

SOURCES OF LOUISIANA ENERGY INDICATOR DATA

Publications

Electric Power Monthly. U.S. Dept. of Energy, Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels.
- Electricity Production and Consumption Data

Employment and Total Wages Paid by Employers Subject to the Louisiana Employment Security Law. Louisiana Dept. of Labor, Office of Employment Security, Research and Statistics Unit. Quarterly.
- Wages, Number of Establishments, Employment Data

Louisiana Climatological Data. U.S. Dept. of Commerce, National Weather Service. Monthly.
- Heating and Cooling Degree Days (Not in this issue)

Labor Market Information. Louisiana Dept. of Labor, Office of Employment Security, Research and Statistics Unit. Monthly.
- Employment Data

Louisiana Petroleum Activity Report. Monthly.
- Drilling Rig Activity, Oil and Gas Production, Refinery Runs and Stocks Data

Monthly Energy Review. U.S. Dept. of Energy, Energy Information Administration. Monthly.
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Louisiana State University
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Ms. Sheryl Waldman
SRI Acquisitions
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Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Winter 1983

Louisiana — The Oil Refining State

Michael T. French
Department of Natural Resources

Louisiana plays a dominant role in the production and refining of oil in the U.S. In 1982 Louisiana produced approximately 560 million barrels of crude oil, lease condensate, and natural gas liquids. This amounted to 15% of total U.S. petroleum production and 10% of the U.S. petroleum consumption. Overall, Louisiana consumes about 4.7% of U.S. total energy demand, but Louisiana provides 13.2% of the total U.S. energy requirements from oil and gas produced in the state and in Louisiana's federal offshore waters.

Most of Louisiana's crude oil production (along with a substantial amount of imported crude) is refined in the state. These numerous petroleum products are then distributed nationally and internationally via truck, rail, barge, ocean tanker, and pipeline.

1983 Refining Capacity

In January 1983, Louisiana had 14.1% of total U.S. operating crude oil refining capacity (Table 1). Foreign crude makes up about 31.4% of the input to Louisiana refineries. *Operating capacity is the maximum possible throughput an operating refinery can process.* The *throughput* at which a refinery actually operates *is called the operating rate* and is usually expressed as a per cent of operating capacity.

The operating rate varies with the demand for refined products such as gasoline and heating oil. Long-term sustainable operating rate, however, rarely ever exceeds 90% because of a number of factors beyond product demand.

The combination of the downturn in the economy along with energy conservation induced by high oil prices has reduced the demand for petroleum products and hence depressed refinery operating rates from their high in the seventies.

Operating rates for Louisiana refineries have consistently been higher than the average for all U.S. refineries. As shown in Table 1, Louisiana refineries were operating at an average rate of 81.0% in January compared to the U.S. average of 78.7%.

Operating rates have been improving over the past year for two reasons: (1) demand for petroleum products has recently increased, encouraging refineries to replinish depleted stocks, and (2) a large number of refineries have been idled or permanently shutdown, thereby enabling the remaining refineries to operate at slightly higher rates.

Louisiana Refineries

Crude oil is a mixture of dozens to hundreds of components, depending on the reservoir from which it is produced. A simple refinery that has a basic vacuum distillation capability can only separate crude oil into various groups of components contained in the original crude mixture. The products from this type of operation are entirely dependent on the grade of crude fed into the plant.

In a complex refinery, however, distillation is the first of many process steps. Depending on the downstream processing facilities of a particular refinery, the chemical composition of the crude mixture can be altered to produce more desirable products (high octane gasoline, jet fuel, etc.) rather than separate out only what was contained in the original crude mixture. To enable a refinery to process high sulfur crudes, downstream facilities (e.g., hydrotreating) are required.

On January 1, 1983, there were 258 operable refineries in the U.S. with a combined operable crude distillation capacity of 16.9 million bbl/cd. Of the operable capacity, 1.9 million bbl/cd were idle. *Idle capacity* is defined as temporarily shutdown and capable of restarting within 90 days. *Operable capacity* includes both operating and idle capacity.

As of January 1, 1983, there were 27 operable refineries in Louisiana (Table II on back) with a combined operable crude capacity of 2.6 million bbl/cd. Of the operable capacity, 456,000 bbl/cd were idle.

Included in Table II for each refinery is its capacity of downstream processing. The more downstream processing facilities a refinery has, the more complex it is to operate; however, the more complex refineries are better able to produce currently desired petroleum products and to adjust to changes in product demand and/or changes in crude feedstock. Those efficient, more complex refineries are the ones likely to have a long life in Louisiana.

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[1] *Petroleum Supply Annual 1982*, U.S. Department of Energy, DOE/EIA-0340(82)/1, June 1983.

[2] U.S. Department of Energy, Energy Information Administration, Office of Oil and Gas, Personal Communication, September 9, 1983.

TABLE 1[1]
January 1, 1983 Refinery Operating Data

Operating Crude Oil Capacity	Operating Rate as % of Operating Capacity	Foreign Crude
Total U.S. 14,960,647 bbl/cd*	78.7	28.3%
Total La. 2,115,400	81.0[2]	31.4%

*bbl/cd = barrels per calendar day

Historical Presentation—Crude Oil

Indicator	77.4	78.1	78.2	78.3	78.4	79.1	79.2	79.3	79.4	80.1	80.2	80.3
OIL WELLS COMPLETED												
North	109	89	91	163	150	65	86	234	256	176	185	254
South	77	73	70	76	85	63	61	62	86	58	73	81
Offshore	6	10	5	8	19	5	-	12	4	9	3	4
Total	192	172	166	247	254	133	154	308	346	243	261	339
CRUDE OIL PRODUCTION (MBPD)-Ave.												
North	90.1	88.4	87.1	85.4	84.6	77.3	76.5	80.4	80.7	79.3	80.9	78.4
South	126.8	426.8	431.9	410.5	390.5	367.7	366.8	351.1	341.5	336.0	325.7	313.9
Offshore	81.8	79.8	80.6	78.4	78.6	74.0	75.6	66.3	69.0	68.2	69.2	77.8
Total	298.7	595.0	599.6	574.3	553.7	519.0	518.9	497.8	491.2	483.5	475.8	470.1
WELL HEAD PRICE OF CRUDE OIL ($/bbl.-Ave.)	8.74	8.77	8.89	9.05	9.28	9.66	10.91	13.99	15.89	18.67	20.94	22.49

Indicator	80.4	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2	83.3
OIL WELLS COMPLETED												
North	311	292	243	254	245	256	318	321	203	393	231	372
South	80	72	73	89	83	81	88	81	89	72	29	75
Offshore	4	4	2	6	6	1	4	13	6	2	4	10
Total	395	368	318	349	334	338	410	415	298	467	264	457
CRUDE OIL PRODUCTION (MBPD)-Ave.												
North	77.8	82.7	84.4	83.4	83.6	86.4	86.3	86.6	85.8	83.8	81.3	81.5
South	300.1	291.5	289.9	279.0	272.7	262.6	268.1	263.1	264.0	252.3	259.9	254.6
Offshore	66.8	68.1	67.3	62.7	63.5	61.7	63.4	62.9	57.6	59.4	64.9	61.6
Total	444.7	442.3	441.6	425.1	419.8	410.7	417.8	412.6	407.4	395.5	406.1	397.7
WELL HEAD PRICE OF CRUDE OIL ($/bbl.-Ave.)	24.32	32.36	32.62	31.13	30.90	29.65	27.81	28.20	28.52	26.57	25.95	25.06

FOOTNOTES

1. A change in the DNR surveying practices is partially responsible for the drop in the number of rigs in 1983, especially in the north.
2. Reflects rate increase granted SWEPCO by the PSC, April 19, 1982.
3. Industrial Sale Price by Major Pipeline Companies.
4. Intrastate A price was computed as the weighted average price charged by Louisiana Intrastate, Monterey, and Sugar Bowl gas transmission companies. Intrastate B was computed by adding Texaco (27% market share at 34¢/MCF) to Intrastate A. Data on Texaco was taken from Foster and Associates *The Impact of NGPA on Intrastate Markets in Louisiana*, 1982. Data on the other three companies was supplied by the Louisiana Public Service Commission.
5. Heating degree days are deviations of mean daily temperature below 65°F.
   Cooling degree days are deviations of the mean daily temperature above 65°F.
   (Ex. When a recorded mean daily average is 80°F, cooling degree-days would be 15 and heating degree days, 0; for 45°F, heating degree-days would be 20 and cooling degree-days, 0).

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TABLE II

Capacity of Operable Petroleum Refineries in Louisiana as of January 1, 1983

Refinery	Crude Capacity Bbl/cd	* Type of Capacity

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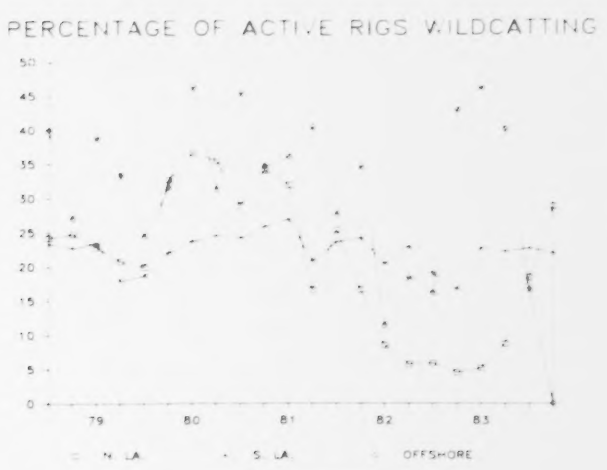
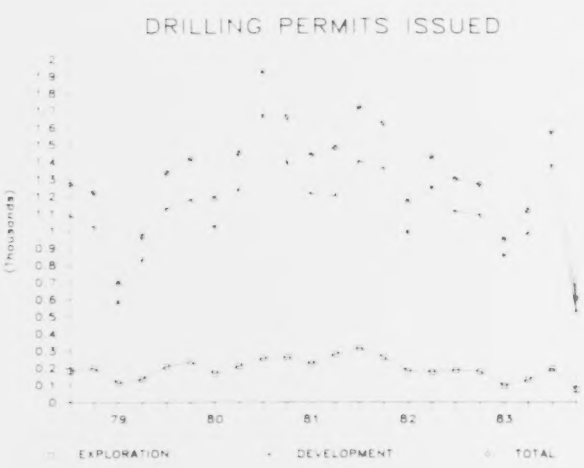
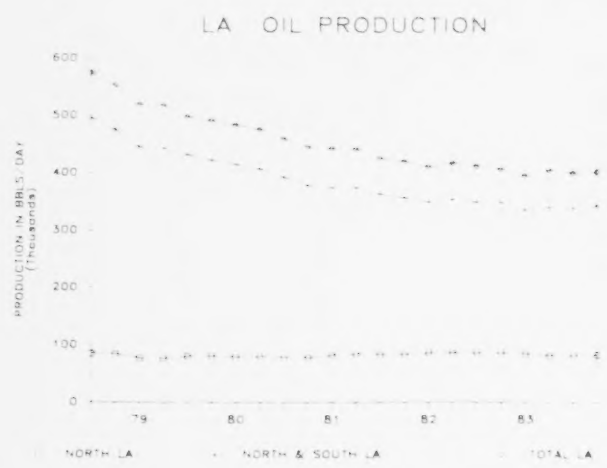


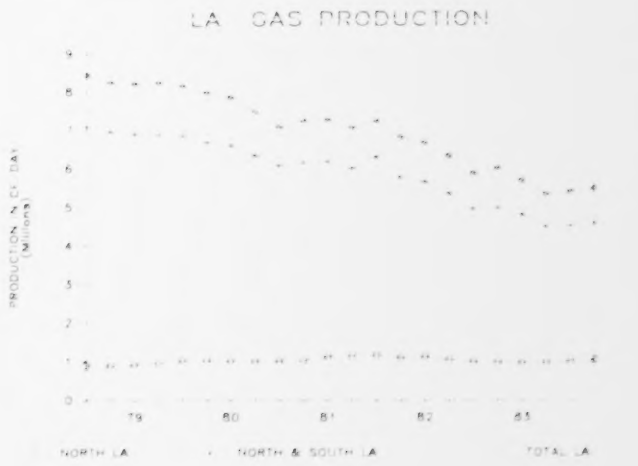


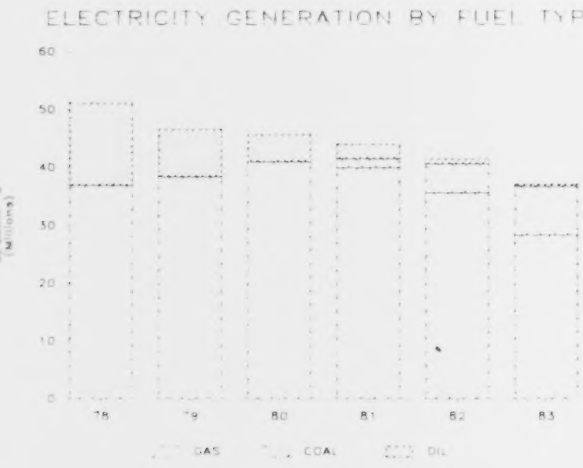


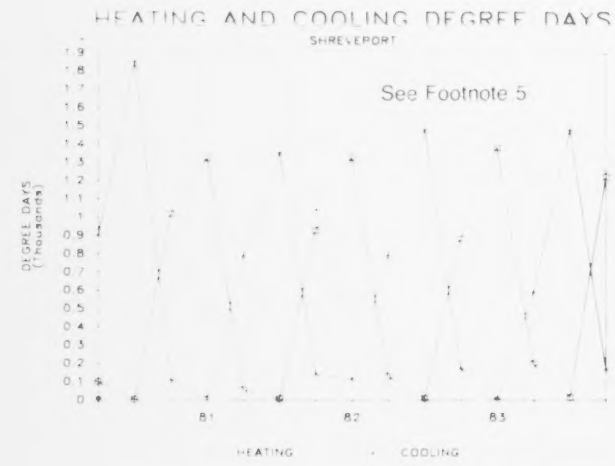
Figures represent total
except when otherwise noted.

Indicator	1978	1979	1980	1981	1982	1983.1	1983.2	1983.3	Oct	Nov	Dec	1983.4	Year To Date Through Last Month Reported 1982	Year To Date Through Last Month Reported 1983	Percent Change
OIL WELLS COMPLETED															
North	493	641	926	1,034	1,173	393	231	372	128	124	157	136	1,173	1132	-3.5
South	304	272	292	317	339	144	79	75	20	43	29	31	339	329	-2.9
Offshore	42	28	20	18	24	2	4	10	2	1	3	2	24	18	-25
Total	839	941	1,238	1,369	1,536	539	314	457	150	168	189	169	1,536	1,479	-3.7
GAS WELLS COMPLETED															
North	722	989	1,301	1,212	1,021	136	123	139	112	80	57	249	1,021	647	-36.6
South	345	342	322	352	381	84	54	49	14	15	12	41	381	728	+60.2
Offshore	43	30	40	31	39	4	13	3	1	3	1	5	39	25	-35.9
Total	1,110	1,361	1,663	1,595	1,441	224	190	191	127	98	70	295	1,441	900	-37.5
DRY HOLES DRILLED															
North	589	575	822	893	988	161	151	239	121	141	170	432	988	983	-.5
South	649	680	733	895	734	166	135	101	54	66	68	188	734	590	-19.6
Offshore	18	36	51	52	38	15	11	13	3	3	7	13	38	52	36.8
Total	1,256	1,291	1,606	1,840	1,760	342	297	353	178	210	245	633	1,760	1,625	-7.7
ACTIVE RIGS - WILDCATTING (Ave.)															
North	20	18	34	33	10	7	4	13	21	18	18	19	10	10.8	8
South	46	38	64	59	32	39	25	29	30	32	39	33.7	32	31.7	-.9
Offshore	2	4	7	6	3	6	5	1	0	1	0	.3	3	3.1	3.3
Total	68	60	105	98	45	52	34	43	51	51	57	53.6	45	45.6	1.1
ACTIVE RIGS (Ave. INR)[1]															
North	75	74	103	119	164	100	46	69	73	79	70	74	164	72.3	-55.9
South	190	185	244	249	161	149	113	129	137	170	202	169.7	161	140.2	-12.9
Offshore	9	14	17	18	12	13	12	8	11	13	18	14	12	11.8	-1.7
Total	274	273	364	386	337	262	171	206	221	262	290	257.7	337	224.3	-33.4
RUNNING RIGS (Ave. Hughes Tool Co.)															
North	29	35	52	59	40	34	22	29	31	31	36.5	32.8	40	29.5	-26.3
South	133	169	171	243	168	143	114	115	127	143	153	141	168	128.3	-23.6
Total	162	204	223	302	208	177	136	144	158	174	189.5	173.8	208	157.7	-24.2
DRILLING PERMITS															
Total	4,352	4,419	6,237	6,281	5,181	947	1,119	1,581	604	668	575	1,847	5,181	5,494	6.0

Production & Consumption







Figures represent totals
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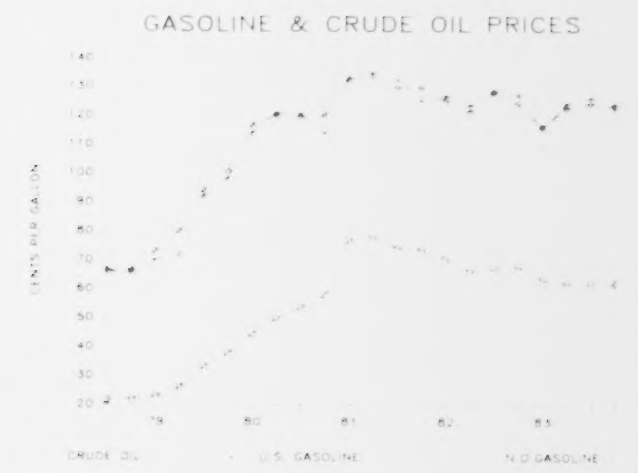
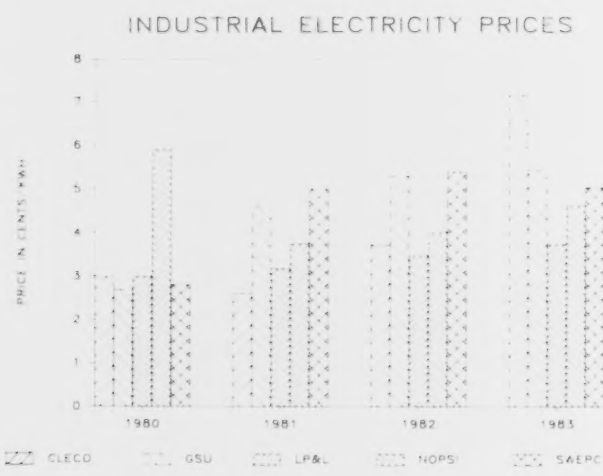
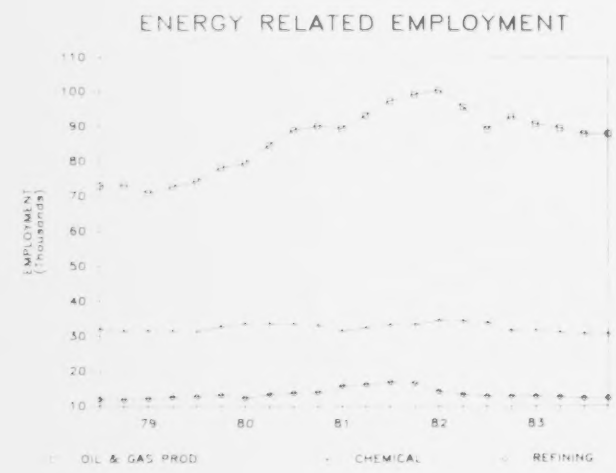
Indicator	1978	1979	1980	1981	1982	1983.1	1983.2	1983.3	Oct	Nov	Dec	1983.4	Year to Date Through Last Month Reported 1982	Year to Date Through Last Month Reported 1983	Percent Change
ELECTRICITY PRODUCTION (Gigawatts)															
Gas generated	36,921	38,394	40,955	39,948	35,539	5,780	6,642	9,426	2,148	2,089	2,226	6,463	35,539	28,311	-20.3
Oil generated	14,283	8,260	4,778	2,635	940	16	27	13	2	3	295	100	940	356	-62.1
Coal generated	0	0	0	1,528	5,938	1,758	1,663	2,535	847	686	888	2,421	5,938	8,377	41.1
Total generated	51,204	46,654	45,733	44,111	42,417	7,554	8,332	11,974	2,997	2,778	3,409	9,184	42,417	37,044	-12.7
NATURAL GAS PRODUCTION (MMCFPD)															
North	908	979	1,000	1,135	1,032	961	811	1,010	1,037	1,062	1,059	1,052.7	1,032	958.7	-7.1
South	6,235	5,845	5,275	4,921	4,195	3,830	3,163	3,497	3,539	3,759	3,677	3,658.3	4,195	3,537.1	-15.7
Offshore	1,340	1,309	1,118	1,025	983	886	769	888	891	898	795	861.3	983	851.1	-13.4
Total	8,483	8,133	7,393	7,081	6,210	5,677	4,743	5,395	5,467	5,719	5,531	5,572.3	6,210	5,346.8	-13.9
REFINERY RUNS (MMBPD) - Ave.	1.85	1.92	1.7	1.73	1.72	1.56	1.68	1.69	1.65	1.74	1.56	1.65	1.72	1.6	-7.0
CRUDE OIL STOCK (MMBbls.) - Ave.	13.5	13.5	16.4	13.01	12.08	12.0	13.82	13.7	13.6	13.5	13.8	13.6	12.08	13.3	10.1
CRUDE OIL PRODUCTION (Unit of Meas.)															
North	86.4	78.7	79.1	83.5	86.3	83.8	81.3	82.0	83.0	82.1	72.8	79.3	86.3	81.6	-5.4
South	414.9	356.8	318.9	283.2	259.8	252.0	259.2	258.3	261.5	257.0	246.4	255.0	259.8	256.1	-1.4
Offshore	79.3	71.2	67.9	65.4	60.2	59.3	64.9	65.0	58.7	60.0	60.7	59.8	60.2	62.3	3.5
Total	580.6	506.7	465.9	432.1	406.3	395.1	405.4	405.3	403.2	399.1	379.9	394.1	406.3	400.0	-1.6
GASOLINE CONSUMPTION (Millions Gal.)															
Louisiana	2,157	2,158	2,013	2,103	2,143	502	575	630	188	177	186	551	2,143	2,258	-5.4
U.S.	116,780	112,628	106,340	104,158	102,886	24,582	26,142	18,341	8,471	8,071	8,102	24,644	102,886	93,709	-8.9
ELECTRICITY CONSUMPTION (Gigawatts)															
Residential	16,024	16,082	17,459	18,119	12,978	3,591	3,530	6,387	1,572	1,149	1,122	3,843	12,978	17,351	33.7
Commercial	8,529	8,670	9,128	9,592	9,234	2,165	2,319	3,031	927	809	757	2,493	9,234	10,008	8.4
Industrial	21,992	24,420	25,175	26,318	22,713	5,629	5,777	6,199	2,150	2,070	2,011	6,231	22,713	23,836	4.9
Other	3,612	3,720	3,751	4,117	3,737	980	1,003	1,148	334	295	312	941	3,737	4,072	9.0
Total	50,157	52,892	55,513	58,146	48,662	12,365	12,629	16,765	4,983	4,323	4,202	13,508	48,662	55,267	13.6

Prices & Employment







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Indicator	1978	1979	1980	1981	1982	1983.1	1983.2	1983.3	Oct	Nov	Dec	1983.4	Year To Date Through Last Month Reported 1982	Year To Date Through Last Month Reported 1983	Percent Change
ELECTRICITY PRICES (¢/kwh)															
Industrial															
CLECO	4.1	4.5	5.1	6.0	7.1	6.8	7.4	7.6	6.1	5.7	6.3	6.0	7.1	7.0	-1.4
GSU	3.3	3.8	4.1	5.1	5.6	6.1	6.4	6.2	3.8	3.4	3.3	3.5	5.6	5.6	0
LP&L	2.5	3.0	4.1	5.2	5.7	5.8	6.0	5.7	4.5	4.7	4.4	4.5	5.7	5.5	-3.5
NOPSI	4.1	4.7	5.0	6.0	6.3	5.9	5.8	6.0	5.2	5.0	4.7	5.0	6.3	5.7	-9.5
SWEPCO [2]	3.1	3.0	3.7	3.8	5.2	5.3	5.8	6.0	4.7	4.7	4.8	4.7	5.2	5.4	3.8
GASOLINE PRICES (Ave. ¢/Gal.)															
New Orleans Ave. Retail Pump	66.43	100.67	113.57	131.3	124.2	115.7	123.8	124.1	122.9	121.1	119.7	121.2	124.2	121.2	-2.4
U.S. Ave. Retail Pump	65.38	98.11	119.87	131.1	127.9	115.2	122.6	125.9	123.5	122.4	120.6	122.2	127.9	121.5	-5.0
NATURAL GAS PRICES ($/MCF)															
Interstate [3]	0.91	1.18	1.59	1.98	3.72	4.29	4.28	4.18	4.22	4.26	4.12	4.20	3.72	4.23	13.7
Intrastate (A) [4]	1.76	2.14	2.70	3.40	3.71	3.82	3.74	3.77	3.72	3.75	3.78	3.75	3.71	3.77	1.6
Intrastate (B)	1.39	1.66	2.06	2.56	2.80	2.87	2.82	3.09	3.05	3.07	3.10	3.07	2.80	2.96	5.7
WELL HEAD PRICE OF OIL															
$/bbl. Ave	9.28	15.88	24.32	31.85	28.50	26.57	25.86	25.99	26.04	26.09	25.88	26.00	28.50	26.105	-8.4
EMPLOYMENT (Ave.)															
Oil and gas production (SIC 13)	73.24	78.17	90.11	94.72	93.55	90.66	89.5	87.8	87.8	88.3	76.3	84.1	93.55	88.02	-5.9
Chemical and allied products (SIC 28)	31.46	32.79	33.16	32.66	32.41	31.73	31	30.6	30.5	30.3	29.5	30.1	32.41	30.9	-4.7
Petroleum Refining (SIC 29)	11.73	13.12	13.87	14.33	13.16	12.93	12.3	12.1	12.1	12.0	12.0	12.0	13.16	12.3	-6.5
HEATING DEGREE DAYS															
Shreveport	2,910	2,559	2,409	2,316	2,351	1,381	198	15	69	305	848	1,222	2,316	2,816	21.6
COOLING DEGREE DAYS															
Shreveport	NA	NA	2,874	2,300	2,557	7	591	1,478	126	39	0	165	2,557	2,241	-12.4
CRUDE ALLOWABLES (MBPD)															
North	104.6	104.5	105.8	112.4	113.2	116.8	116.3	113.4	13.6	114.9	114.9	114.5	113.2	115.3	1.8
South	450.9	404.4	375.7	340.1	319.7	319.7	302.5	308.4	312.2	309.8	309.8	310.6	319.7	310.3	-2.9
Offshore	85.7	83.9	79.4	75.8	72.1	72.1	70.2	67.8	71.6	73.3	73.3	72.7	72.1	70.7	-1.9
Total	641.2	592.8	560.9	528.3	505.0	505.0	486.6	493.4	497.6	498	498	497.9	505.0	495.7	-1.8

Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Spring, 1984

ENERGY CONSUMPTION: NATURAL GAS AND PETROLEUM

T. Michael French
Energy, Research, and Planning Division
Technology Assessment Section
Louisiana Department of Natural Resources

Louisiana produces far more energy in the form of natural gas and petroleum than it consumes. On the production end of the scale, Louisiana supplies 30% of the total petroleum and natural gas consumed by the U.S., including offshore federal waters. Conversely, Louisiana's consumption represents only 5% of the U.S. total.[1,2]

This discussion focuses on the forms of energy Louisiana uses now and how much is used by each consuming sector. Based on the assumption that 1981 consumption data is more representative of anticipated energy uses, 1981 data will be used to present expected consumption trends as the state recovers from its 1982-83 economic slump.

In 1981, Louisiana consumed 3501 trillion BTU's, equivalent to 604 million barrels of crude oil. That same year, Louisiana's energy needs were met by 52.3% natural gas, 41.6% petroleum, 5.4% electricity from other states, and 0.7% coal. This compares to the U.S. average of 43.1% petroleum, 21.6% natural gas, 21.6% coal, 4.3% hydropower, gothermal, and miscellaneous, and 4.0% nuclear.[1]

Energy Consumers

Louisiana's appetite for energy is enormous. Our state ranks first in per capita energy consumption and seventh in total energy consumption among the fifty states.[1] The main consumer is industry—63.9% of the total energy used in Louisiana is the manufacturing industries, excluding associated transportation activity (pipelines, barges, trucks)—and the reason for this high energy consumption is the heavy concentration of energy-intensive industries in Louisiana. A breakdown of natural gas and petroleum by end use sector is provided in Table 1.

In 1981, Louisiana's natural gas consumption was 1830 trillion BTUs—52.3% of the state's total energy supply. The two largest users of natural gas—industry and electric power—represented 89% of total Louisiana consumption, and industry consumed approximately 46% of the purchased electrical power in the state.

Louisiana petroleum consumption in 1981 was 1458 trillion BTUs, 41.6% of the state's energy consumption.[3] Again, industry use was dominant and represented 50% of the state's total petroleum consumption. This figure would have been higher if all transportation fuel uses (i.e., rail, barge, ship, etc.) directly associated with industrial activity had been included.

Future Developments

Louisiana's high energy consumption is caused by the extensive energy-intensive primary chemicals and petroleum refining industries which make up the state's manufacturing base. While natural gas is the chief fuel for these industries, petroleum and natural gas-fired electricity also are significant. Coal or lignite use by Louisiana industry is only 2% of Louisiana energy consumption, and there is little likelihood that this situation will change significantly during the 1980s. Thus, our economy will, no doubt, remain dependent on natural gas for many years to come.

The only significant activity with alternate fuel usage is in the electrical utility industry, which in 1981 represented only 13.6% of the state's total energy consumption. In 1981, there was no nuclear power generation in the state, and coal represented only 0.7% of Louisiana's energy supply. 68% of coal usage was attributable to utilities but represented only 3.7% of the total fuel supply to utilities.[3] By 1983, coal supplied 18% of Louisiana's generated electric power, while petroleum comprised 9% and natural gas 73%.[5,6]

By 1990, Louisiana's electric power generation is expected to be 18% coal and lignite, 16% nuclear (including Louisiana's share of Mississippi Power and Light's Grand Gulf operation), 8% petroleum, and 58% natural gas.[6] Therefore, natural gas will still be the predominant fuel source for electric power generation during the next decade.

Since our natural gas and petroleum are *national* resources, the state cannot control their ultimate disposition. These resources are finite and will someday be exhausted, no matter who controls them. As a result, Louisiana citizens must realize that the state needs to begin now to develop alternate energy sources, such as coal, nuclear, and solar, in order to assure a smooth transition from the energy sources of today to those of the next century.

Note: Any views or opinions expressed are those of the author, not necessarily those of the Center for Energy Studies or the Department of Natural Resources.

Table 1. Natural Gas and Petroleum Use in Louisiana, 1981. [3,4,5]

	Natural Gas (%)		Petroleum (%)	
End Use Sector	**Louisiana**	**Total U.S.**	**Louisiana**	**Total U.S.**
Industry*	65	42	50	26
Electric Power	24	19	2	7
Residential	5	23	0	5
Transportation (i.e., pipelines)	4	3	40	59
Commercial	2	13	8	3

* Industry usage of natural gas can be subdivided into feedstock (15%) for Louisiana and 3% for the U.S.) and fuel or other (50% for Louisiana and 39% for the U.S.).

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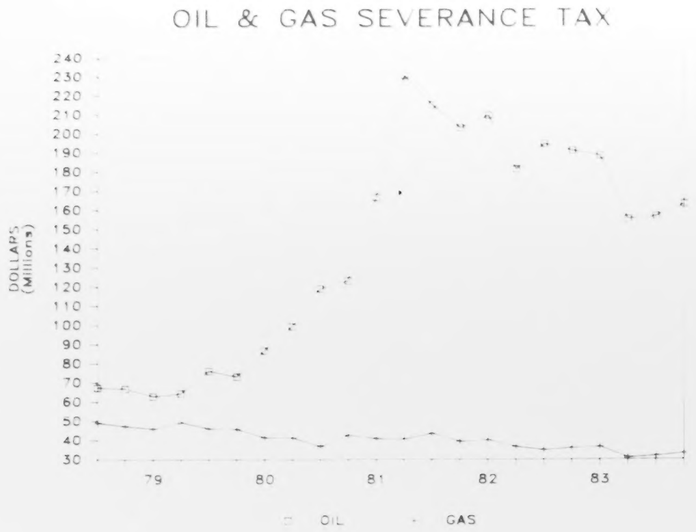
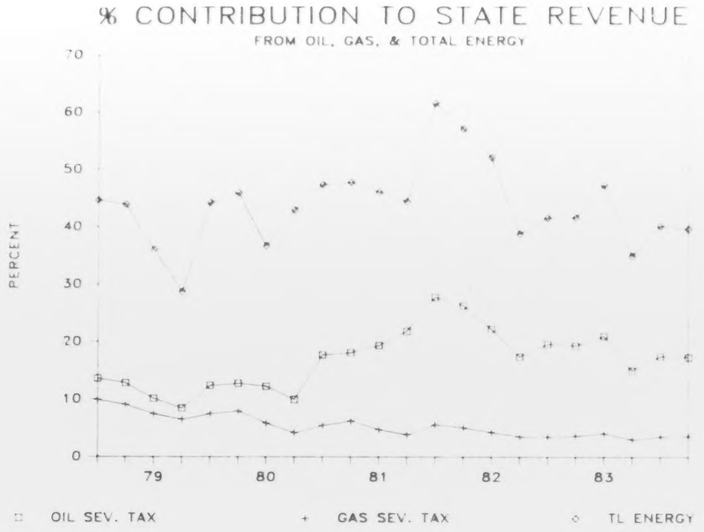
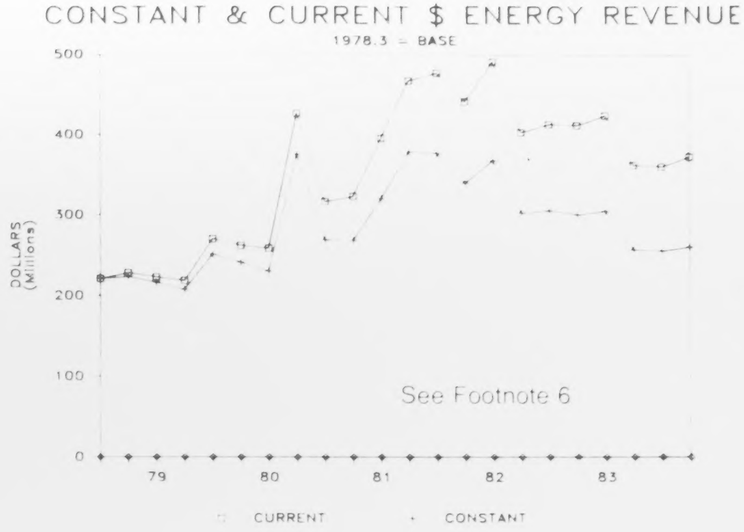
A report entitled *Louisiana Energy Outlook*, released in March 1984 by the Department of Natural Resources, examines Louisiana's energy issues and outlines in detail some of the options Louisiana has for its energy future. This article is an overview of consumption trends and future developments as presented in that publication.







Historical Presentation—Revenues

	78.1	78.2	78.3	78.4	79.1	79.2	79.3	79.4	80.1	80.2	80.3	80.4
PRINCIPAL ENERGY RELATED STATE REV. (Millions $)												
Severance - oil and condensate	62.88	66.17	67.51	66.99	62.96	64.48	76.10	73.04	86.68	99.20	118.92	123.06
Severance - natural gas	49.37	50.31	49.07	47.36	45.96	49.39	46.02	46.02	41.38	41.25	36.73	42.63
Bonuses	68.67	9.01	8.48	10.49	15.27	12.86	43.17	35.46	16.81	180.21	2.93	20.08
Rentals	2.72	.59	2.21	2.97	8.16	4.05	4.80	5.17	8.02	5.56	10.85	7.13
Royalties	44.82	34.51	44.00	46.77	45.23	46.06	51.29	51.87	57.15	62.80	65.51	67.16
Special fuels tax	4.49	5.17	5.11	5.31	5.11	5.68	5.42	5.97	5.24	5.77	6.03	5.86
Gasoline tax	38.67	43.53	45.08	42.77	40.80	30.06	43.02	42.68	38.50	40.90	41.66	40.38
Natural gas franchise tax	1.17	1.42	1.19	1.15	1.27	1.44	.97	1.08	1.65	1.97	1.32	1.35
Total	272.8	210.7	222.7	223.8	224.8	214	270.8	261.3	255.4	437.7	284	307.7
Total State Revenues (Millions $)	601.4	648.1	495.3	520.3	619.6	761.5	611.9	571.8	706.1	994.1	669.2	677.5
Energy Related Revenues As % of State Total	45.4	32.5	45	43	36.3	28.1	44.3	45.7	36.2	44	42.4	45.4

	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2	83.3	83.4
PRINCIPAL ENERGY RELATED STATE REV. (Millions $)												
Severance - oil and condensate	166.65	230.39	215.16	203.12	209.65	181.36	194.68	191.14	188.52	154.0	158.88	163.3
Severance - natural gas	40.85	40.65	43.52	39.23	40.16	36.52	34.79	36.05	36.59	31.69	31.87	33.34
Bonuses	40.46	38.85	46.14	29.21	27.93	17.07	9.31	12.83	10.53	9.74	4.45	12.68
Rentals	11.20	10.54	11.26	13.40	15.32	14.13	12.31	11.92	10.45	7.36	5.88	5.49
Royalties	84.76	110.58	120.69	98.63	153.97	105.58	110.42	112.74	130.99	103.92	102.69	105.65
Special fuels tax	5.68	6.29	6.01	6.77	6.09	6.56	6.31	6.57	6.06	6.85	6.92	7.05
Gasoline tax	40.67	41.21	38.70	45.03	40.14	41.25	40.81	40.09	36.69	40.86	40.33	41.78
Natural gas franchise tax	1.89	2.71	1.61	1.55	2.39	2.77	2.11	2.34	3.31	3.79	2.84	2.72
Total	392.2	481.2	483.1	436.9	495.7	405.2	410.7	413.7	423.1	358.2	353.9	372
Total State Revenues (Millions $)	860.1	1,054.4	774.8	773.1	943.2	1,040.4	994.9	990.8	897.1	1,036.9	898.1	942.8
Energy Related Revenues As % of State Total	45.6	45.6	62.4	56.5	52.6	39	41.3	41.8	47.2	34.5	39.4	39.5

FOOTNOTES

1. A change in the DNR surveying practices is partially responsible for the drop in the number of rigs in 1983, especially in the north.
2. Reflects rate increase granted SWEPCO by the PSC, April 19, 1982.
3. Industrial Sale Price by Major Pipeline Companies.
4. Intrastate A price was computed as the weighted average price charged by Louisiana Intrastate, Monterey, and Sugar Bowl gas transmission companies. Intrastate B was computed by adding Texaco b)27°₀ market share at 34c/MCF) to Intrastate A. Data on Texaco was taken from Foster and Associates *The Impact of NGPA on Intrastate Markets in Louisiana*, 1982. Data on the other three companies was supplied by the Louisiana Public Service Commission.
5. Heating degree days are deviations of mean daily temperature below 65 F.
   Cooling degree days are deviations of the mean daily temperature above 65 F.
   (Ex. When a recorded mean daily average is 80 F, cooling degree-days would be 15 and heating degree days, 0; for 45 F, heating degree-days would be 20 and cooling degree-days, 0.
6. Constant dollar data was derived by deflating the current dollar data by the GNP Implicit Price Deflator, using its value for 1978.3 as the base period.

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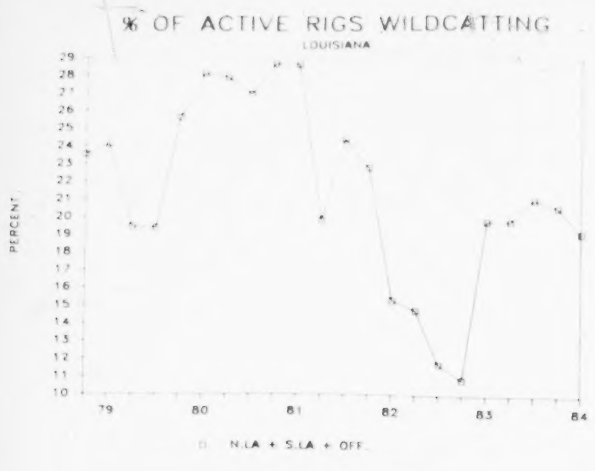

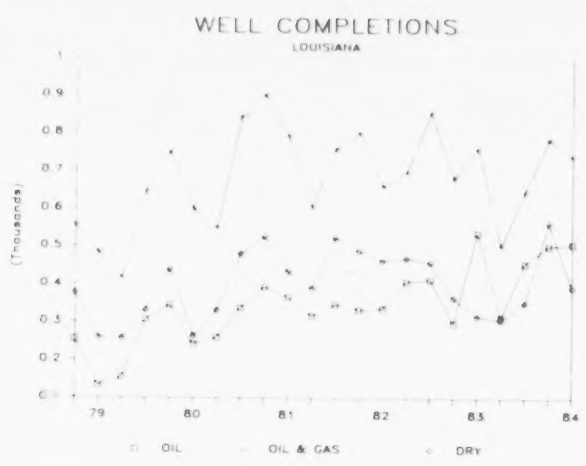

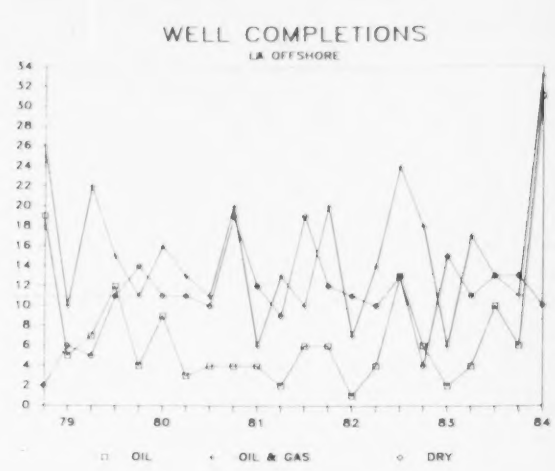

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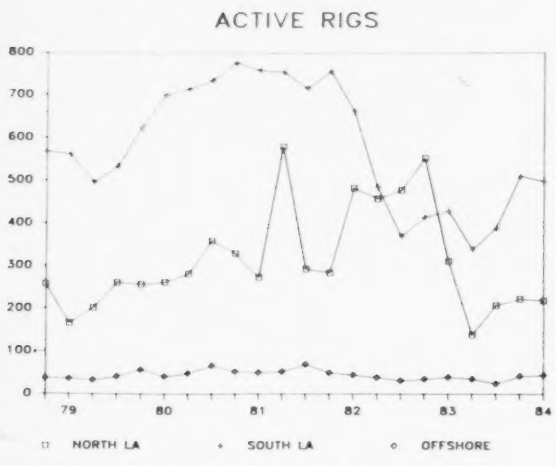
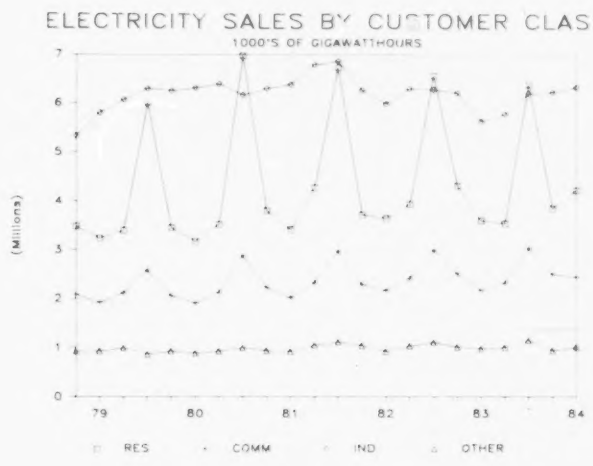
except when otherwise noted

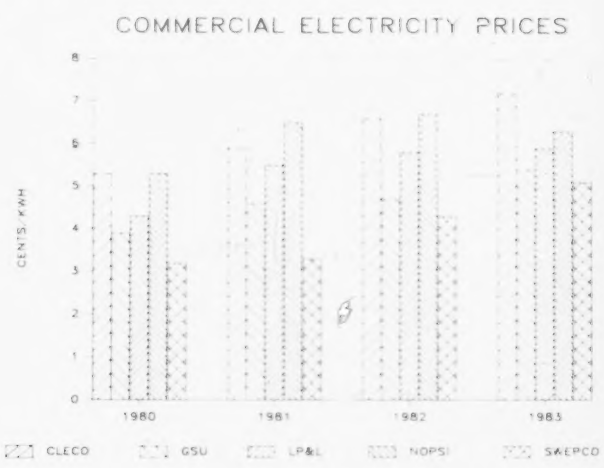
Totals may not add due to rounding

Indicator	1979	1980	1981	1982	1983	1983.2	1983.3	1983.4	Jan	Feb	Mar	1984.1	Year to Date Through Last Month Reported March 1983.1	Year to Date Through Last Month Reported March 1984.1	% Change
OIL WELLS COMPLETED															
North	641	926	1,034	1,173	1,132	231	372	409	113	124	129	237	393	237	-39.7%
South	272	292	317	339	329	79	75	89	36	39	37	112	72	112	55.6%
Offshore	28	20	18	24	18	4	10	6	11	15	5	31	2	31	1450.0%
Total	941	1,238	1,369	1,536	1,479	314	457	504	160	178	42	380	467	380	-18.6%
GAS WELLS COMPLETED															
North	989	1,301	1,212	1,021	647	123	139	249	96	37	28	161	135	161	19.4%
South	342	322	352	381	228	54	49	41	20	26	22	68	84	68	-19.0%
Offshore	30	40	31	39	25	13	3	5	1	1	0	2	4	2	-50.0%
Total	1,361	1,663	1,595	1,441	900	190	191	295	117	64	50	231	224	231	3.1%
DRY HOLES DRILLED															
North	575	822	883	988	983	151	239	432	83	66	45	194	161	194	20.5%
South	680	733	895	734	590	135	101	188	69	53	67	189	168	189	13.9%
Offshore	36	51	52	38	52	11	13	13	3	2	5	10	15	10	-33.3%
Total	1,291	1,608	1,840	1,760	1,625	297	353	633	155	121	117	393	342	393	14.9%
ACTIVE RIGS-WILDCATTING (Ave.)															
North	18	34	33	10	11	4	13	19	16	11	10	12	7	12	75.7%
South	38	64	59	32	32	25	29	34	35	36	35	35	39	35	-8.5%
Offshore	4	7	6	3	3	5	1	0	0	0	2	1	8	1	-88.3%
Total	80	105	98	45	46	34	43	53	51	47	47	48	52	48	-7.1%
ACTIVE RIGS (Ave. DNR)[1]															
North	74	103	118	164	72	46	69	74	78	67	73	73	100	73	-27.3%
South	185	244	249	161	140	113	128	170	176	163	158	166	149	166	11.2%
Offshore	14	17	18	12	12	12	8	14	15	13	18	15	13	15	13.1%
Total	273	364	386	337	224	171	206	258	269	243	247	253	262	253	-3.4%
RUNNING RIGS (Ave.Hughes Tool)															
North	35	52	59	40	30	22	28	33	34	32	30.0	32.0	34	32.0	-5.9%
South	169	171	243	168	128	114	115	141	169	153	151.3	157.8	143	157.8	10.3%
Total	204	223	302	208	158	136	144	174	203	185	181.3	189.8	177	189.8	7.2%

Production & Consumption







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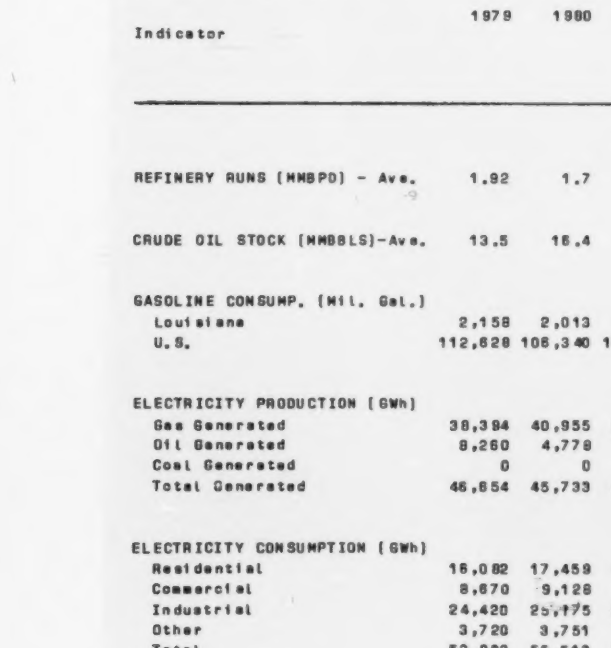
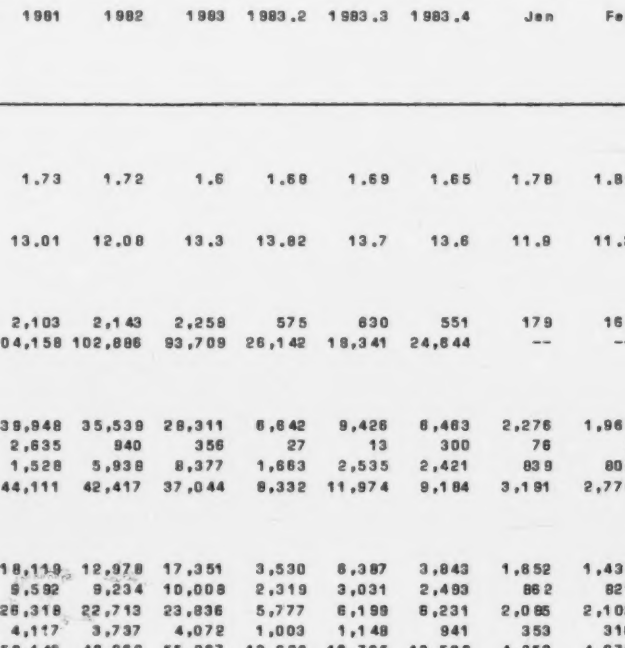
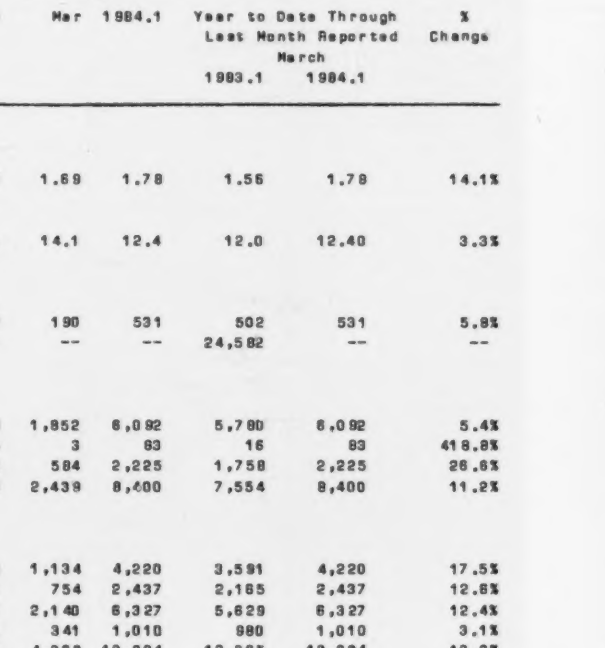
REFINERY RUNS (MMBPD) - Ave.	1.92	1.7	1.73	1.72	1.6	1.68	1.69	1.65	1.78	1.88	1.69	1.78	1.56	1.78	14.1%
CRUDE OIL STOCK (MMBBLS)-Ave.	13.5	16.4	13.01	12.08	13.3	13.82	13.7	13.6	11.9	11.2	14.1	12.4	12.0	12.40	3.3%
GASOLINE CONSUMP. (Mil. Gal.)															
Louisiana	2,158	2,013	2,103	2,143	2,258	575	630	551	179	162	190	531	502	531	5.8%
U.S.	112,628	106,340	104,158	102,886	93,709	26,142	18,341	24,644	--	--	--	--	24,582	--	--
ELECTRICITY PRODUCTION (GWh)															
Gas Generated	38,394	40,955	39,948	35,539	28,311	6,842	9,426	6,463	2,276	1,964	1,852	6,092	5,780	6,092	5.4%
Oil Generated	8,260	4,778	2,635	940	356	27	13	300	76	4	3	83	16	83	418.8%
Coal Generated	0	0	1,528	5,938	8,377	1,663	2,535	2,421	839	802	584	2,225	1,758	2,225	26.6%
Total Generated	46,654	45,733	44,111	42,417	37,044	8,332	11,974	9,184	3,191	2,770	2,439	8,400	7,554	8,400	11.2%
ELECTRICITY CONSUMPTION (GWh)															
Residential	16,082	17,459	18,119	12,978	17,351	3,530	6,387	3,843	1,852	1,434	1,134	4,220	3,591	4,220	17.5%
Commercial	8,670	9,128	9,592	9,234	10,008	2,319	3,031	2,493	862	821	754	2,437	2,165	2,437	12.6%
Industrial	24,420	25,175	28,318	22,713	23,836	5,777	6,199	6,231	2,085	2,102	2,140	6,327	5,629	6,327	12.4%
Other	3,720	3,751	4,117	3,737	4,072	1,003	1,148	941	353	316	341	1,010	980	1,010	3.1%
Total	52,892	55,513	58,146	48,662	55,267	12,629	16,765	13,508	4,952	4,673	4,369	13,994	12,365	13,994	13.2%

Prices & Revenues







Figures represent TOTAL
except when otherwise noted

Totals may not add due to rounding

Indicator	1979	1980	1981	1982	1983	1983.2	1983.3	1983.4	Jan	Feb	Mar	1984.1	Year to Date Through Last Month Reported March 1983.1	Year to Date Through Last Month Reported March 1984.1	% Change
ELEC. PRICES (Cents/KWH)-Ave.															
Commercial															
CLECO	4.6	5.3	5.8	6.6	7.2	7.2	6.9	7.6	7.9	7.9	7.8	7.8	7.1	7.8	9.9%
GSU	3.5	3.8	4.6	4.7	5.4	5.7	5.3	5.5	5.5	5.4	5.7	5.5	5.8	5.5	-5.2%
LP&L	3.2	4.3	5.5	5.8	5.9	5.8	5.8	5.9	5.7	5.9	6.1	5.9	6.0	5.9	-1.7%
NOPSI	4.9	5.3	6.5	6.7	6.3	6.1	6.3	6.4	6.2	6.5	6.6	6.4	6.5	6.4	-1.5%
SWEPCO[2]	2.5	3.2	3.3	4.3	5.1	5.1	5.1	5.3	4.6	5.4	5.1	5.0	4.9	5.0	2.0%
GASOL. PRICES (Cents/Gal.)															
N.O. Ave. Retail Pump	100.67	113.57	131.3	124.2	121.2	123.8	124.1	121.2	120.16	120.68	121.05	120.6	115.7	120.6	4.2%
U.S. Ave. Retail Pump	98.11	119.87	131.1	127.9	121.5	122.6	125.9	122.2	120.50	120.80	121.40	120.9	115.5	120.9	4.9%
NAT. GAS PRICES ($/MCF)-Ave.															
Interstate[3]	1.18	1.59	1.98	3.72	4.23	4.28	4.18	4.20	4.25	3.97	4.18	4.13	4.29	4.13	-3.7%
Intrastate (A)[4]	2.14	2.70	3.40	3.71	3.77	3.74	3.77	3.75	3.80	3.76	3.83	3.80	3.82	3.80	-0.5%
Intrastate (B)[4]	1.66	2.06	2.56	2.80	2.96	2.82	3.09	3.07	2.9	2.84	2.89	2.87	2.87	2.87	0.0%
WELL HEAD PRICE OF OIL ($/BBL) - U.S. Ave.	15.68	24.32	31.85	28.50	26.11	25.88	25.99	26.00	25.93	26.06	26.03	26.0	26.57	26.0	-2.1%
PRINCIPAL ENERGY RELATED STATE REV.(Millions $)															
Sev. - Oil & Condensate	276.58	427.86	815.32	776.89	501.40	154.00	158.88	183.30	58.71	75.20[5]	52.89	184.8	188.52	184.8	-2.0%
Sev. - Natural gas	187.39	161.99	184.25	147.52	100.15	31.69	31.87	33.34	12.36	14.25[5]	10.95	23.3	36.59	23.3	-36.3%
Bonuses	106.76	220.03	154.66	67.14	24.69	9.74	4.45	12.68	3.59	4.51	4.22	12.3	10.53	12.3	16.8%
Rentals	22.18	31.56	46.40	53.66	23.69	7.36	5.88	5.49	1.00	1.83	1.33	4.2	10.45	4.2	-59.8%
Royalties	194.43	252.62	414.68	482.71	337.80	103.62	102.69	105.65	37.28	34.85	33.94	106.1	130.99	106.1	-19.0%
Special Fuels Tax	22.18	22.90	24.75	25.53	19.83	6.85	6.92	7.05	2.67	2.20	2.20	7.1	6.06	7.1	17.2%
Gasoline Tax	158.58	161.44	165.61	162.29	117.88	40.66	40.33	41.78	14.02	12.59	12.06	38.7	36.69	38.7	5.5%
Nat. Gas Franchise Tax	4.76	6.59	7.76	8.61	9.04	3.79	2.84	2.72	0.03	2.11	0.91	3.1	3.31	3.1	-6.3%
Total Energy Revenues	970.84	1284.99	1793.41	1725.31	1135.18	358.21	353.86	372.01	127.88	133.29	118.50	379.5	423.14	379.5	-10.3%
Total State Revenues (Millions $)	2,269.5	3,248.1	3,000.2	3,824.9	2,748.8	1,036.8	898.1	942.8	312.1	307.1	382.4	981.6	897.1	981.6	9.4%
Energy Related Revenues As % of State Total	42.8	39.6	59.8	45.1	41.3	34.5	39.4	39.5	40.9	48.0	32.7	40.1	47.2	40.1	-15.0%

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Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Summer 1984

WELL PERMITS: AN INDICATOR OF FUTURE PRODUCTION IN LOUISIANA?

James E. Willis, Associate Professor
Quantitative Business Analysis
Louisiana State University

Oil and natuural gas production are important to Louisiana as a source of raw materials and energy for its industries, as a source of employment for businesses which support production, as a source of energy for its residential sector, and as a source of tax revenue for its governmental sector. Forecasts of production are thus important in many phases of business and governmental planning. This discussion focuses on one component of future production, that derived from current drilling permits, and some reasons why there is a large measure of uncertainty forecasting this component.

Well History

The Louisiana Department of Natural Resources (DNR) maintains a data base containing historical information on the state's wells; within DNR, basic data are collected by the Office of Conservation. For each well permitted, *a record is kept containing a history of the well from the date it is permitted to the current time.* Some information going into this data base is disseminated by DNR through its *PETROLEUM ACTIVITY REPORT.*

Production

Current production emanates from wells that are actively producing at this point of time; future production from these wells will be influenced by future market conditions. Improvements in market conditions may cause "shut-in productive" wells to be activated again. Also, secondary and tertiary recovery methods may be used to produce from "dry" wells, if the cost-benefit ratio becomes favorable.

While production from existing wells will in both the short and long run be influenced by future market conditions, those conditions are not fully predictable at the present time. *Another factor which must not be ignored, especially in long run forecasts of production, is the fact that these wells are drawing from fixed reserves, and production rates will decline over time naturally.*

Additional reserves of oil and gas will emanate from future wells which either extend the boundaries of existing fields or tap new fields. These wells begin with "field extension" ("development") and "wildcat" drilling permits, respectively. *These permit series, thus, should be indicators of future production.* One must, however, take into account lag time and volume-of-production uncertainties in using these to make projections; obviously, much less is known about future wells than about existing wells. Sources of some of these uncertanties are identified in the remainder of this discussion.

Permitting Process

The permitting process consists of several steps, beginning with submission of an application to a District Office by an operator. These are forwarded to the Office of Conservation for final approval or disapproval. If an environmental issue is in question, special hearings and permits may be required prior to approval. A permit to drill is valid for 90 days, at the end of which time application for permit renewal (also valid for 90 days) may be sought. If the permit expires without renewal or the renewal expires before drilling activity is begun, a new permit must be issued. Thus, it is possible for a well to be listed as "permitted" for as long as six months before its status changes to "expired" or "drilling in progress."

Separate permits must be approved for each depth interval from which production is sought from a single well; these are called "duals" and "triples" for second and third intervals, respectively. And those classified as a "dual" or "triple" permit will obviously differ in drilling time from the original well permit. Many factors affect a decision to proceed with drilling or allow the permit to elapse. Evaluations of a venture can change as new information becomes available from other wells or as anticipated markets for future production change.

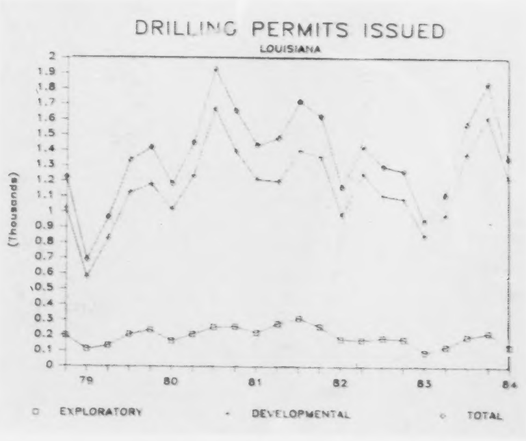
Drilling

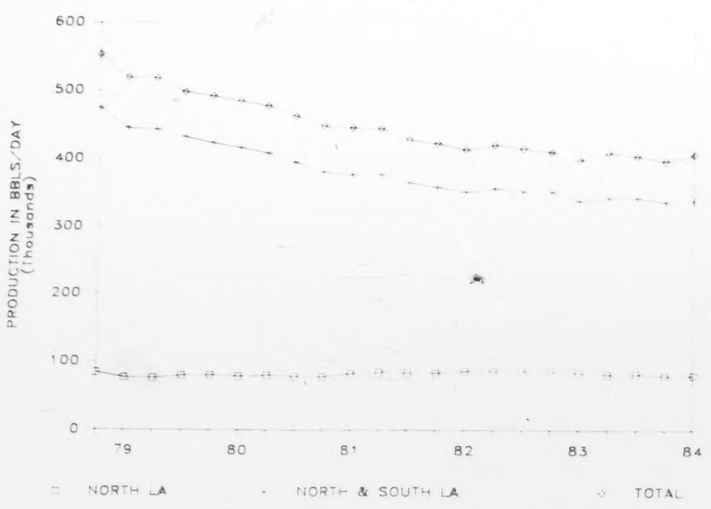
Once drilling begins, the amount of drilling time required depends on various factors. One obvious factor is the well depth; others are the hardness of the formations through which the well must be drilled and the presence of water or high pressure zones. Production "trends" or target formations vary in depth around the state; north Louisiana trends are generally shallower than those in south Louisiana. The rock formations in the northern fields are also generally older and harder than those in the south. Drilling times, thus, vary from well to well; they may be anywhere from one week to one year. Generally, the deeper the well, the longer the time required to drill.

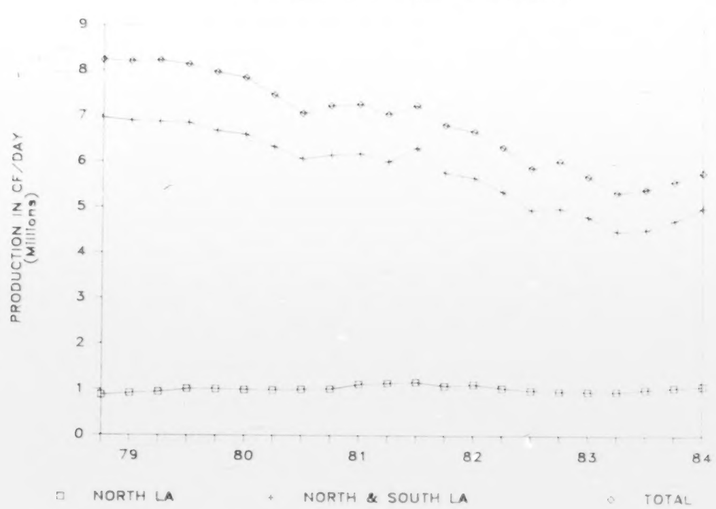
After the well is drilled, a Completion Report is filed with the Office of Conservation to indicate that the well has been "plugged and abandoned" or that production casing has been installed. Which of these will transpire is uncertain at the time that the well is permitted. Some time elapses between drilling and the submission of a Completion Report; additional time elapses before production is possible because a well potential test and assignment of an allowable production rate are required. For natural gas wells, production time may be further delayed because a pipeline to collect gas from the well is necessary; many months may elapse before a connection is made.

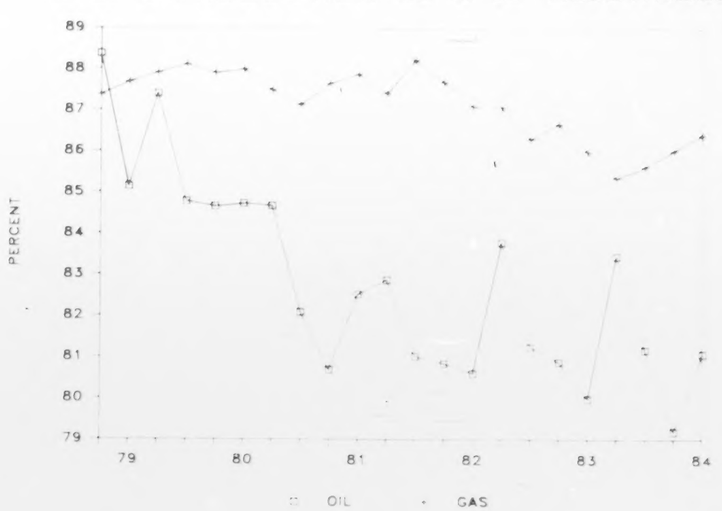
An Indicator?

Uncertainties in the timing and likelihood of production resulting from newly permitted wells make the permit series less than an ideal indicator of short run changes in new well production, much less an indicator of total production. However, market conditions affecting decisions to produce from existing wells and to drill new wells can be the same. Variations in those factors may result in related changes in the two series even if not in an obvious way. *In the long run, newly permitted wells may simply keep total production from declining as rapidly as it would otherwise.*









Historical Presentation—Permitting & Production

Figures represent TOTAL
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Totals may not add due to rounding

Indicator	78.2	78.3	78.4	79.1	79.2	79.3	79.4	80.1	80.2	80.3	80.4	81.1
NATURAL GAS PRODUCTION (BCFPD) - Ave.												
North	0.91	0.89	0.88	0.92	0.95	1.00	1.00	1.00	0.99	1.00	1.00	1.10
South	6.30	6.10	6.00	5.90	5.90	5.80	5.60	5.50	5.30	5.00	5.10	5.00
Offshore	1.30	1.30	1.20	1.30	1.30	1.20	1.20	1.20	1.10	0.99	1.00	1.00
Total	7.60	8.29	8.08	8.12	8.15	8.00	7.80	7.70	7.39	6.99	7.10	7.10
CRUDE OIL PRODUCTION (MBPD) - Ave.												
North	87.1	85.4	84.6	77.3	76.5	80.4	80.7	79.3	80.9	78.4	77.8	82.7
South	431.9	410.5	390.5	367.7	366.8	351.1	341.5	336.0	325.7	313.9	300.1	291.5
Offshore	80.6	78.4	78.2	74.0	75.6	66.3	69.0	68.2	69.2	67.3	66.8	68.1
Total	599.6	574.3	553.3	519.0	518.9	497.8	491.2	483.5	475.8	459.6	444.7	442.3
DRILLING PERMITS ISSUED												
Exploratory	187	184	200	112	135	209	238	167	211	257	263	223
Developmental	889	1,088	1,024	579	832	1,130	1,184	1,020	1,242	1,678	1,399	1,217
Total	1,076	1,272	1,224	691	967	1,339	1,422	1,187	1,453	1,935	1,662	1,440

Indicator	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2	83.3	83.4	84.1
NATURAL GAS PRODUCTION (BCFPD) - Ave.												
North	1.10	1.10	1.00	1.10	1.00	0.99	0.97	0.96	0.96	1.00	1.00	1.00 P
South	4.80	5.10	4.60	4.50	4.30	3.90	4.00	3.80	3.50	3.40	3.60	3.80 P
Offshore	1.00	0.93	1.00	1.00	0.97	0.91	1.00	0.88	0.84	0.88	0.86	0.77 P
Total	6.90	7.13	6.60	6.60	6.27	5.80	5.97	5.64	5.30	5.28	5.46	5.57 P
CRUDE OIL PRODUCTION (MBPD) - Ave.												
North	84.4	83.4	83.6	86.4	86.3	86.6	85.8	83.8	81.3	82.0	79.3	80.1 P
South	289.9	279.0	272.7	262.6	268.1	263.1	264.0	252.3	259.9	258.3	255.0	256.1 P
Offshore	67.3	62.7	63.5	61.7	63.4	62.9	57.7	59.4	64.9	65.0	59.8	67.0 P
Total	441.6	425.1	419.8	410.7	417.8	412.6	407.5	395.5	406.1	405.3	394.1	403.2 P
DRILLING PERMITS ISSUED												
Exploratory	282	318	263	182	176	189	180	95	131	197	222	131
Developmental	1,204	1,408	1,366	988	1,260	1,113	1,093	852	988	1,384	1,625	1,225
Total	1,486	1,726	1,629	1,170	1,436	1,302	1,273	947	1,119	1,581	1,347	1,356

P = Preliminary

FOOTNOTES

1. A change in the DNR surveying practices is partially responsible for the drop in the number of rigs in 1983, especially in the north.
2. Reflects rate increase granted SWEPCO by the PSC, April 19, 1982.
3. Industrial Sale Price by Major Pipeline Companies.
4. Intrastate A price was computed as the weighted average price charged by Louisiana Intrastate, Monterey, and Acadian gas transmission companies. Intrastate B was computed by adding Texaco (27% market share at 34¢ MCF) to Intrastate A. Data on Texaco was taken from Foster and Associates THE IMPACT OF NGPA ON INTRASTATE MARKETS IN LOUISIANA, 1982. Data on the other three companies was supplied by the Louisiana Public Service Commission.
5. Reflects change in collection date of Louisiana General Severance Tax. Act 604 of 1983 Regular Session amending R.S. 47:635, R.S. 47:640 and R.S. 47:645(A).

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Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Fall 1984

Cooling and Heating Degree Days and Their Impact on Energy Use in Louisiana

Robert A. Muller,
Professor and State Climatologist
Departments of Geography and Anthropology
Agricultural Engineering

INTRODUCTION

Residential energy demand is strongly related to seasonal regimes of climate. Appliances and lighting are used consistently throughout the year and constitute a basic consumption of energy year round. Superimposed on this constant demand for energy are much larger seasonal needs for heating and cooling. In the South, the greatest seasonal demand is for electricity for cooling in the summer.

COOLING DEGREE DAYS

Cooling degree days represent an index of how climate impacts energy demands for cooling. The base for the cooling degree index is a mean daily temperature of 65°F. The mean temperature of each day is calculated by summing maximum and minimum temperatures and dividing by two. If maximum and minimum temperatures of a day were 80°F and 60°F respectively, the mean daily temperature would be 70°F. *Cooling degree units are counted for each degree that the mean daily temperature is greater than the base of 65°F;* hence, the cooling degree day sum would be 5°F. For days when the average temperature is less than 65°F, no cooling days are accumulated, and the index for these days is equal to zero.

The relationship of the cooling degree day index to energy demands for cooling must be treated as only an approximate representation. A good example is a day with maximum and minimum temperatures ranging from 75°F and 65°F. The mean is 70°F, and the cooling degree day sum is 5°F. Most residents of Louisiana would not turn on air conditioning units during this thermal regime. But on another day when maximum and minimum temperatures are 85°F and 55°F, and the cooling degree sum is 5°F, it is more likely that air conditioning units would be turned on during the heat of the day.

The figure shows the annual regime of cooling days at the two locations with the largest and smallest annual sums in Louisiana. At Plain Dealing, cooling degrees are of little significance during the winter months or even during November and March. The summer peak is reached during July when the average is slightly greater than 510 cooling degree units for the month.

Among the stations in Louisiana with climatic normals, the station with the greatest annual sum is Audubon Park in New Orleans. This station is affected by the urban heat island of New Orleans and is significantly warmer than the station at New Orleans International Airport. The figure shows that some degree days are accumulated during each of the winter months, so that energy utilization for cooling is significantly greater at these times than in central or northern Louisiana. In July, the total is about 550 cooling degree units or 10 percent more than for Plain Dealing. Because of the lag of summer heat well into August and September, cooling degree days are much higher in these months than in northern Louisiana; thus residential electricity demand is also higher.

HEATING DEGREE DAYS

The figure also shows heating degree days. This index is very similar to the cooling degree day index and is also derived from a base of 65°F for the mean daily temperature. Days with mean daily temperatures of 60°F and 40°F would have heating degree day totals of 5°F and 25°F, respectively. Days with mean daily temperatures of 65°F or greater contribute nothing to the daily, weekly or seasonal sums of heating degree days.

The figure shows that there are essentially no heating degree days on the average at Audubon Park in New Orleans from May through September, and that the really significant heating season extends from November through March. Heating degree day sums peak at Audubon Park during January, when the monthly sum amounts to almost 400 heating degree units on the average.

The heating degree day season averages about two months longer in northern Louisiana with significant sums in October and April. At Plain Dealing the peak month is January, with an average total of 670 heating degree units. The January total at Plain Dealing is more than 50 percent greater than at New Orleans, and the costs of winter heating are very much more significant in northern than in southern Louisiana.

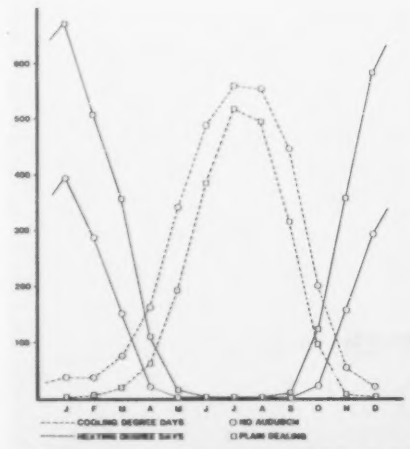
Variablity of heating degree day sums for the winter season are much greater than variability of cooling degree day sums for the long summers.

Insulation is the key to minimizing heat losses in winter. The heat losses can be especially large during polar and Arctic outbreaks, when cold-air advection can produce astounding temperature falls for subtropical latitudes near the Gulf Coast. Near record-breaking Arctic outbreaks can result in a day with maximum and minimum temperatures of 30°F and 0°F in northern Louisiana, and 40°F and 10°F over southern Louisiana. For a single date this Arctic outbreak can produce 50 and 40 heating degree day totals for northern and southern Louisiana, respectively. These daily sums are close to ten percent of the average monthly totals for January. Demands for natural gas and electricity come very close to supply limits during Arctic outbreaks.

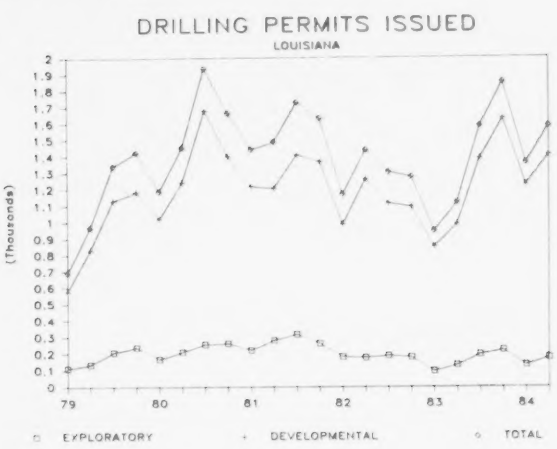
With air conditioning operating continuously throughout the warmer seasons, residential energy costs in Louisiana tend to be greater in summer than winter. A workable strategy ought to be to collect as much solar radiation as possible in winter and to avoid as much as possible during the summer. For residential energy demands, the workable strategy should be to shade the home in summer with broadleaf deciduous trees that shed their leaves during the winter.

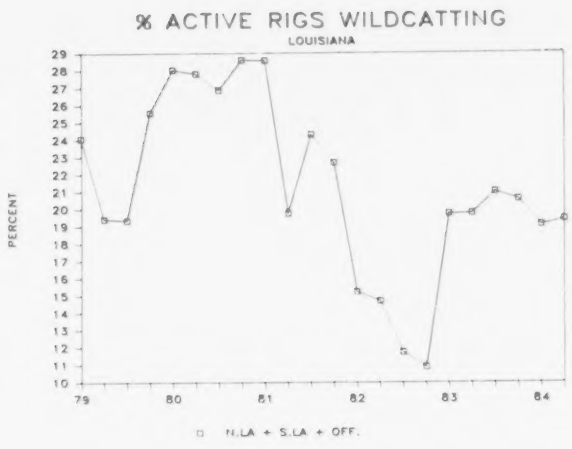
Since heating and cooling degree data, combined with residential electricity consumption data, reveal considerably heavier energy usage for summer cooling, it appears more beneficial from an energy viewpoint to minimize the effect of the sun in the summer than to maximize the effect of the sun's winter warmth. One reasonable way to do this is to select light-colored roofs which reflect as much as 50% of the incoming solar radiation.

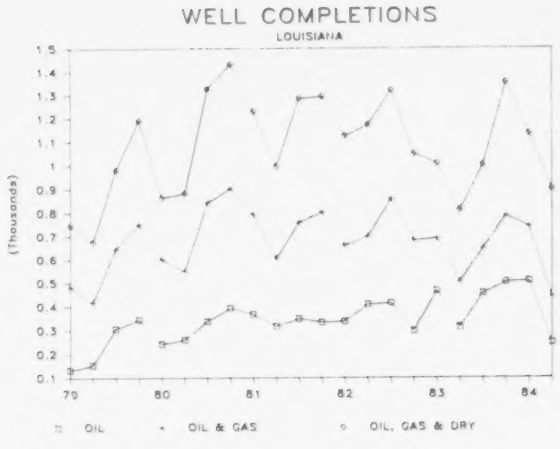
Similarly, based on available climatic data, architects and engineers can be consulted about the most favorable orientations, roof overhangs, windows, etc., to minimize winter heating and summer cooling. As residents and businesses throughout the state face large utility rate increases, such planning can produce tremendous savings.



Drilling







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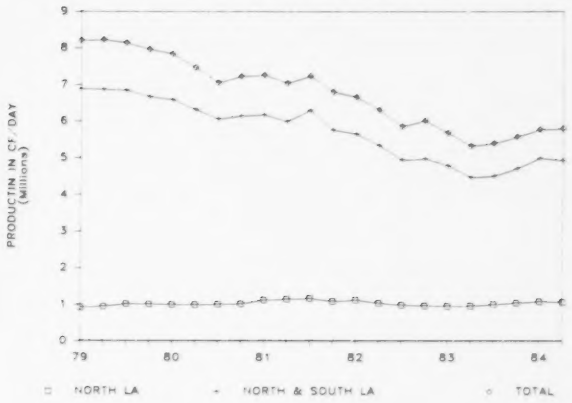
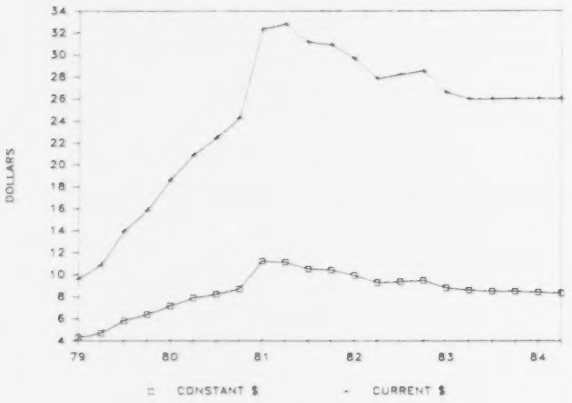
Indicator	1979	1980	1981	1982	1983	1983.3	1983.4	1984.1	Apr	May	Jun	1984.2	Year to Date Through Last Month Reported June 1983.2	Year to Date Through Last Month Reported June 1984.2	% Change
OIL WELLS COMPLETED															
North	641	926	1,034	1,173	1,132	372	409	366	196	157	193	546	824	912	46.2%
South	272	292	317	339	329	75	99	112	40	45	18	103	151	215	42.4%
Offshore	28	20	18	24	18	10	6	31	13	7	3	23	6	54	800.0%
Total	941	1,238	1,369	1,536	1,479	457	504	509	249	209	214	672	781	1,181	51.2%
GAS WELLS COMPLETED															
North	989	1,301	1,212	1,021	647	139	249	161	40	50	37	127	259	288	11.2%
South	342	322	352	381	228	49	41	68	21	24	11	56	138	124	-10.1%
Offshore	30	40	31	39	25	3	5	2	3	5	1	9	17	11	-35.3%
Total	1,361	1,663	1,595	1,441	900	191	295	231	64	79	49	192	414	423	2.2%
DRY HOLES DRILLED															
North	575	822	893	969	963	239	432	194	77	71	116	264	312	458	46.8%
South	680	733	895	734	590	101	188	189	69	66	48	182	301	371	23.3%
Offshore	36	51	52	38	52	13	13	10	6	3	3	12	26	22	-15.4%
Total	1,291	1,606	1,840	1,760	1,625	353	633	393	151	140	167	458	639	851	33.2%
ACTIVE RIGS-WILDCATTING (Ave.)															
North	18	34	33	10	11	13	19	12	11	11	11	11	6	12	100.0%
South	38	64	59	32	32	29	34	35	31	30	46	36	32	36	10.9%
Offshore	4	7	6	3	3	1	0	1	2	3	0	2	8	2	-75.0%
Total	60	105	98	45	46	43	53	48	44	44	57	49	44	49	11.4%
RUNNING RIGS (Ave. Hughes Tool)															
North	35	52	58	40	30	29	33	32	28	32	31	30	29	31	10.7%
South	169	171	243	168	128	115	141	158	139	135	133	136	128	147	14.0%
Offshore (Federal)	138	140	154	136	125	110	129	134	123	118	118	120	130	127	-2.3%
Total	342	363	456	344	283	254	303	324	290	285	282	286	287	305	6.3%
DRILLING PERMITS ISSUED															
Exploratory	694	898	1086	727	645	197	222	131	32	75	69	176	226	307	35.8%
Developmental	3725	5339	5195	4454	4849	1384	1625	1225	413	461	528	1403	1840	2628	42.8%
Total	4419	6237	6281	5181	5494	1581	1847	1356	445	536	598	1579	2066	2935	42.1%

Production, Consumption & Employment

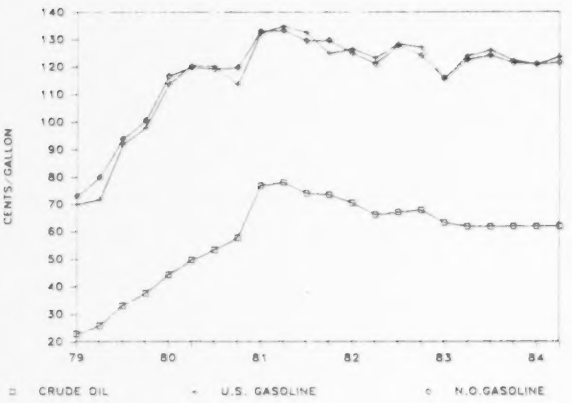
LA GAS PRODUCTION



WELLHEAD PRICE OF OIL



GASOLINE & CRUDE OIL PRICES



Figures represent TOTAL except when otherwise noted

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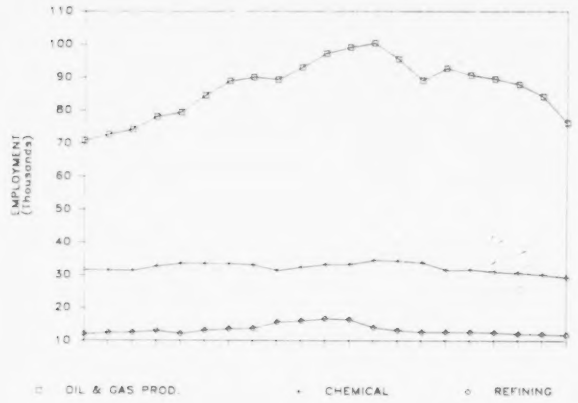
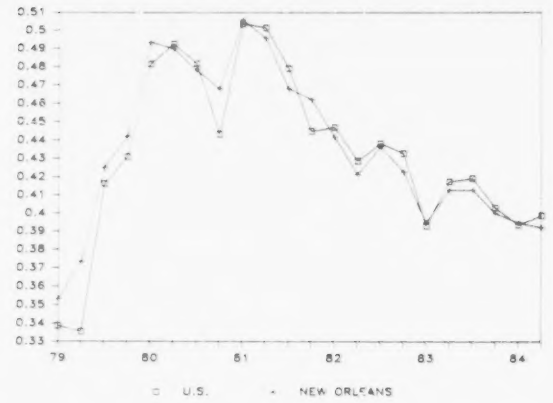
Indicator	1979	1980	1981	1982	1983	1983.3	1983.4	1984.1	Apr	May	Jun	1984.2	Year to Date Through Last Month Reported June 1983.2	Year to Date Through Last Month Reported June 1984.2	% Change
REFINERY RUNS (MMBPD) - Ave.	1.92	1.7	1.73	1.72	1.6	1.69	1.65	1.78	1.83	1.84	1.84	1.77	1.82	1.77	8.3%
CRUDE OIL STOCK (MMBBLS)-Ave.	13.5	16.4	13.01	12.09	13.3	13.7	13.6	12.4	14.0	13.2	13.0	13.4	12.93	12.94	0.1%
GASOLINE CONSUMP. (Mil. Gal.)															
Louisiana	2,158	2,013	2,103	2,143	2,258	830	551	531	178	184	218	581	1,077	1,122	4.2%
U.S.	112,628	106,340	104,158	102,886	83,709	18,341	24,844	24,853	--	--	--	--	50,724	--	--
CRUDE OIL PRODUCTION (MBPD) - Ave.															
North	78.7	79.1	83.5	86.3	81.6	82.0	79.3	80.1	80.8	80.1	80.4	80.4	82.5	80.3	-2.7%
South	356.8	318.9	283.3	284.5	258.1	259.3	255.0	258.1	267.9	266.8	266.8	267.2	258.1	261.7	2.2%
Offshore	71.2	87.6	65.4	61.4	62.3	65.0	59.8	67.4	68.7	70.8	71.8	70.5	62.1	69.0	11.1%
Total	506.7	485.6	432.2	412.2	400.0	405.3	394.1	403.6	417.4	417.8	418.1	418.1	400.7	411.0	2.6%
NATURAL GAS PRODUCTION (BCFPD) - Ave.															
North	0.97	1.00	1.13	1.03	0.99	1.01	1.05	1.09	1.05	1.05	1.09	1.06	0.98	1.07	11.5%
South	5.84	5.27	4.92	4.19	3.82	3.49	3.85	3.80	3.87	3.87	3.83	3.86	3.87	3.88	5.7%
Offshore	1.30	1.11	1.02	0.98	0.87	0.88	0.86	0.77	0.92	0.89	0.85	0.89	0.86	0.83	-3.5%
Total	8.11	7.38	7.07	6.20	5.48	5.38	5.56	5.75	5.84	5.81	5.78	5.80	5.48	5.78	5.3%
EMPLOYMENT (Ave.)															
Oil and Gas Production [SIC13]	74.0	85.7	94.7	94.4	89.0	87.8	84.1	78.2	74.1	73.5	75.5	74.4	80.1	75.3	-16.4%
Chemicals and Allied Products [SIC28]	31.8	33.4	32.8	33.5	30.8	30.6	30.1	29.2	29.1	29.1	29.1	29.1	31.4	29.2	-7.0%
Petroleum Refining [SIC29]	12.5	13.2	16.3	13.1	12.3	12.1	12.0	11.7	11.7	11.7	11.7	11.7	12.6	11.7	-7.1%

Prices & Revenues

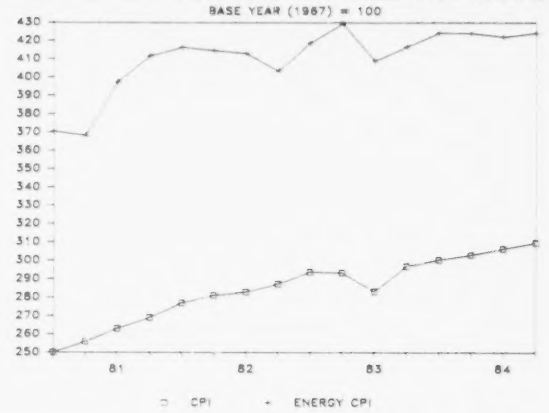
ENERGY RELATED EMPLOYMENT



GASOLINE PRICES IN CONSTANT 1967 $



CPI & CPI FOR ENERGY RELATED GOODS



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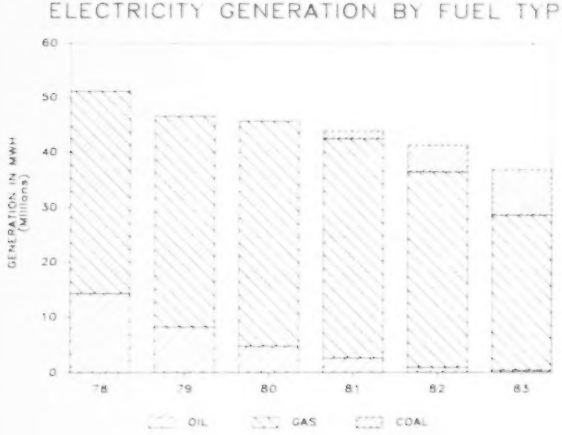
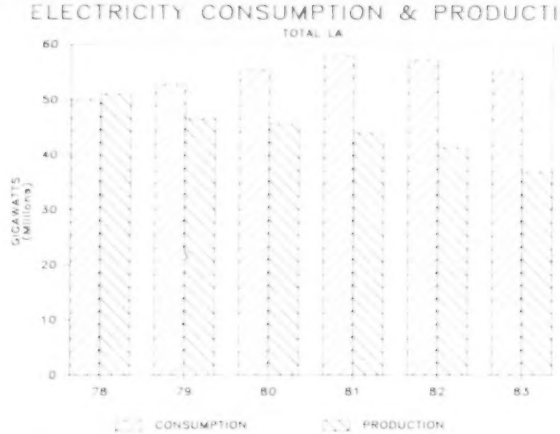
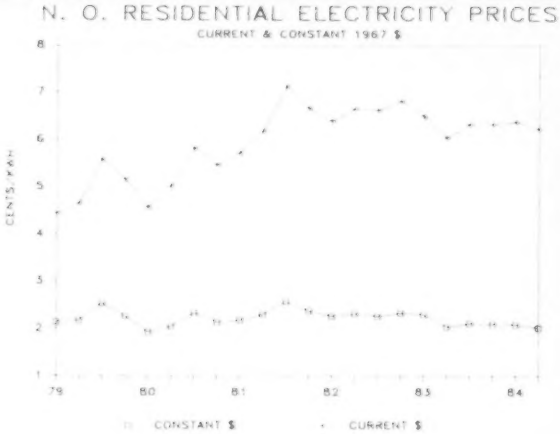
Indicator	1979	1980	1981	1982	1983	1983.3	1983.4	1984.1	Apr	May	Jun	1984.2	Year to Date Through Last Month Reported June 1983.2	Year to Date Through Last Month Reported June 1984.2	% Change
GASOLINE PRICES (Cents/Gal.)															
N.O. Ave. Retail Pump	100.67	113.57	131.3	124.2	121.2	124.1	121.2	120.6	121.7	121.7	121.0	121.5	119.2	121.2	1.7%
U.S. Ave. Retail Pump	98.11	119.87	131.1	127.9	121.5	125.9	122.2	120.9	122.6	123.0	121.9	122.5	119.6	121.6	1.7%
NAT. GAS PRICES ($/MCF)-Ave.															
Interstate	1.18	1.59	1.98	3.72	4.23	4.18	4.20	4.13	4.11	4.17	4.08	4.12	4.29	4.13	-3.7%
Intrastate (A)	2.14	2.70	3.40	3.71	3.77	3.77	3.75	3.80	3.74	3.73	3.70	3.72	3.78	3.76	-0.5%
Intrastate (B)	1.86	2.06	2.56	2.80	2.96	3.09	3.07	2.87	2.82	2.82	2.79	2.81	2.85	2.84	-0.4%
WELL HEAD PRICE OF OIL ($/BBL) - U.S. Ave.	15.88	24.32	31.85	28.50	26.11	25.89	26.00	26.00	25.93	26.00	26.09	26.01	26.22	26.01	-0.8%
PRINCIPAL ENERGY RELATED STATE REV.(Millions $)															
Sev. - Oil & Condensate	276.58	427.86	815.32	775.83	501.40	158.88	163.30	184.8	50.39	81.00	50.41	181.80	342.52	346.60	1.2%
Sev. - Natural gas	187.39	181.89	184.25	147.52	100.15	31.87	33.34	23.3	9.43	13.09	11.01	33.53	88.29	56.83	-16.8%
Bonuses	106.76	220.03	154.66	67.14	24.69	4.45	12.68	12.3	5.10	2.84	5.19	13.23	20.27	25.53	25.9%
Rentals	22.18	31.56	46.40	53.88	23.69	5.88	5.49	4.2	4.22	1.34	1.56	7.12	17.81	11.32	-36.4%
Royalties	194.43	252.82	414.86	482.71	337.60	102.69	105.65	106.1	36.59	35.33	37.02	108.94	234.81	215.04	-8.5%
Special Fuels Tax	22.18	22.90	24.75	25.53	19.83	6.92	7.05	7.1	2.76	2.44	2.73	7.93	12.81	15.03	16.4%
Gasoline Tax	156.58	181.44	185.61	182.29	117.88	40.33	41.78	38.7	14.02	13.13	14.84	41.79	77.55	80.49	3.8%
Nat. Gas Franchise Tax	4.76	8.59	7.76	9.61	9.84	2.84	2.72	3.1	1.12	1.77	0.11	3.00	7.10	6.10	-14.1%
Total Energy Revenues	970.84	1284.99	1793.41	1725.31	1135.18	353.86	372.01	379.6	123.6	131.0	122.7	377.3	781.4	758.9	-3.1%
Total State Revenues (Millions $)	2,269.5	3,248.1	3,000.2	3,824.9	2,748.8	898.1	942.8	981.6	356.2	449.4	331.8	1137.4	1933.9	2119.0	9.6%
Energy Related Revenues As % of State Total	42.8	39.6	59.8	45.1	41.3	39.4	39.5	38.7	34.7	29.2	37.0	33.2	40.6	35.7	-12.1%
Gross National Product	2628.8	2633.1	2937.7	3073.0	3310.5	3362.2	3436.2	3550.1	--	--	--	3648.4	3221.8	3598.3	11.7%
Producer Price Index	225.8	258.8	293.4	289.3	303.1	304.5	306.0	309.3	311.4	311.7	311.6	311.6	301.1	310.5	3.1%
Consumer Price Index	217.4	246.8	270.4	289.1	298.4	300.5	303.1	306.4	308.8	309.7	310.7	309.7	295.1	308.1	4.4%
Consumer Price Index - Energy	275.8	361.1	410.0	416.1	419.3	424.3	424.3	422.1	424.7	425.4	422.6	424.2	412.9	423.2	2.5%







Historical Presentation—Electricity

Figures represent TOTAL
except when otherwise noted

Totals may not add due to rounding

Indicator	78.3	78.4	79.1	79.2	79.3	79.4	80.1	80.2	80.3	80.4	81.1	81.2
ELECTRICITY SALES BY CUSTOMER CLASS- (GIGAWATTS)												
Residential	6.13	3.78	3.23	3.39	6.00	3.44	3.16	3.51	6.97	3.79	3.40	4.26
Commercial	2.60	2.08	1.91	2.11	2.58	2.05	1.90	2.12	2.87	2.22	2.01	2.32
Industrial	5.93	5.33	5.80	6.06	6.29	6.25	6.31	6.39	8.16	6.30	6.38	6.79
Other	0.98	0.92	0.93	0.89	0.88	0.93	0.88	0.92	1.00	0.93	0.98	1.04
Total	15.54	12.12	11.87	12.55	15.73	12.87	12.25	12.94	17.00	13.24	12.78	14.41
RETAIL RESIDENTIAL PRICE (Cents/KWH)-												
New Orleans	4.90	4.47	4.43	4.65	5.59	5.16	4.56	5.01	5.83	5.46	5.72	6.18
ELECTRICITY PRODUCTION (GIGAWATTS)												
Gas Generated	11.75	11.81	8.08	10.59	11.28	8.42	8.89	9.46	12.87	9.78	8.53	10.49
Oil Generated	3.69	2.65	3.27	1.57	1.18	1.51	1.15	1.51	1.86	0.46	1.22	0.52
Coal Generated	0	0	0	0	0	0	0	0	0	0	0.06	0.52
Total	15.44	14.46	11.35	12.16	12.46	9.93	10.14	10.97	14.33	10.24	9.81	11.53

Indicator	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2	83.3	83.4	84.1	84.2
ELECTRICITY SALES BY CUSTOMER CLASS- (GIGAWATTS)												
Residential	6.73	3.70	3.84	3.92	6.56	3.85	3.59	3.53	6.38	3.94	4.22	3.87
Commercial	2.97	2.28	2.16	2.41	2.98	2.39	2.16	2.31	3.03	2.49	2.43	2.58
Industrial	6.88	6.26	5.98	6.30	6.27	6.13	5.63	5.77	6.19	6.23	6.32	6.63
Other	1.11	1.03	0.92	1.03	1.10	0.98	0.86	1.00	1.14	0.94	1.01	1.08
Total	17.67	13.27	12.70	13.66	16.91	13.35	12.36	12.61	16.74	13.50	13.98	14.16
RETAIL RESIDENTIAL PRICE (Cents/KWH)-												
New Orleans	7.13	6.68	6.39	6.65	6.62	6.82	6.50	6.04	6.33	6.33	6.38	6.23
ELECTRICITY PRODUCTION (GIGAWATTS)												
Gas Generated	11.93	8.97	8.83	9.38	9.81	7.46	5.78	6.84	8.42	6.46	6.09	7.54
Oil Generated	0.82	0.07	0.38	0.47	0.04	0.04	0	0.02	0.01	0.30	0.08	0.01
Coal Generated	0.73	0.21	0.26	1.03	1.95	1.73	1.75	1.66	2.53	2.42	2.22	2.51
Total	13.48	9.25	9.47	10.88	11.80	9.23	7.53	8.32	11.96	9.18	8.39	10.06

FOOTNOTES

1. A change in the DNR surveying practices is partially responsible for the drop in the number of rigs in 1983, especially in the north.
2. Industrial Sale Price by Major Pipeline Companies.
3. Intrastate A price was computed as the weighted average price charged by Louisiana Intrastate, Monterey, and Acadian gas transmission companies. Intrastate B was computed by adding Texaco (27% market share at 34¢/MCF) to Intrastate A. Data on Texaco was taken from Foster and Associates THE IMPACT OF NGPA ON INTRASTATE MARKETS IN LOUISIANA, 1982. Data on the other three companies was supplied by the Louisiana Public Service Commission.

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Center for Energy Studies
E. Fraternity Circle
Louisiana State University
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